



# **STIC Search Report**

## **Biotech-Chem Library**

**STIC Database Tracking Number: 120300**

**TO: Alton Pryor**  
**Location: Rem 4A39**  
**Art Unit: 1616**  
**April 23, 2004**

4C70

**Case Serial Number: 09/807254**

**From: P. Sheppard**  
**Location: Remsen Building**  
**Phone: (571) 272-2529**

**sheppard@uspto.gov**

### **Search Notes**

=> fil hcaplus  
 FILE 'HCAPLUS' ENTERED AT 11:11:59 ON 23 APR 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 23 Apr 2004 VOL 140 ISS 18  
 FILE LAST UPDATED: 22 Apr 2004 (20040422/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>  
 =>

=> d stat que  
 L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
 L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
 L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
 L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L) (LABIATAE OR UMBELLIFER A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
 L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

=>  
 =>

=> d ibib abs hitrn l18 1-13

L18 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:627749 HCAPLUS  
 DOCUMENT NUMBER: 137:291650  
 TITLE: Component composition and antibiotic activity of essential oil from Origanum vulgare L. Grown in some regions of West Siberia  
 AUTHOR(S): Kazarinova, N. V.; Tkachenko, K. G.; Muzychenko, L. M.; Safonova, N. G.; Tkachev, A. V.; Koroljuk, E. A.  
 CORPORATE SOURCE: Inst. Obshch. Patol. Ekol. Cheloveka, NTsKEM, SO RAN, Novosibirsk, Russia  
 SOURCE: Rastitel'nye Resursy (2002), 38(2), 99-103

PUBLISHER: Nauka  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

AB Essential oils of *Origanum vulgare* L. collected in different natural populations on the territory of Mountainous Altai and Novosibirsk region during 1998-1999 are investigated. The following substances are identified in the compn.: sabinene (10%), .beta.-myrcene (5%), 1,8-cineol (3%), cis-.beta.-ocimene (14%), trans-.beta.-ocimene (19%), .gamma.-terpinene (3%), caryophyllene (12%), germacrene D (9%), bicyclogermacrene (3%), and .alpha.-farnesene (4%). Thymol and carvacrol - the principles of essential oil of this species according to literature data, were absent in the species investigated. Thymol was found in essential oil of three samples in trace amts. (0.1-0.2%). Absence of antibiotic activity of the essential oils is shown against *Staphylococcus aureus*, *Candida albicans*, *Pseudomonas aeruginosa* in diln. 300 .mu.g/mL. The samples which contain thymol in trace quantity (<0.5%), in doses of 600 .mu.g/mL have fungicide effect against *Candida albicans*, and bactericide activity against *Pseudomonas aeruginosa*.

IT 87-44-5, Caryophyllene 470-82-6, 1,8-Cineol

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(component compn. and antibiotic activity of essential oil from *Origanum vulgare* L. Grown in some regions of West Siberia)

L18 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:574841 HCAPLUS  
DOCUMENT NUMBER: 137:121078  
TITLE: Pesticidal compositions containing organic phenolic compounds and transition metal salts  
INVENTOR(S): Ninkov, Dusan  
PATENT ASSIGNEE(S): USA  
SOURCE: PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002058469	A1	20020801	WO 2002-US1903	20020123
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2002156135	A1	20021024	US 2002-56593	20020123
EP 1353552	A1	20031022	EP 2002-702056	20020123
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			US 2001-263656P P 20010123	
			WO 2002-US1903 W 20020123	

AB A pesticidal compd. comprises at least one org. phenolic compd. and at least one salt comprising a divalent cation. Preferably, the org. phenolic compd. is chosen from carvacrol, thymol or combinations thereof, and is derived from a natural source, preferably extd. from a member of

the family Lamiaceae or Verbenaceae. Preferably the divalent cation is a transition metal salt and more preferably is zinc chloride or zinc sulfate. The invention also includes methods of eradicating, repelling or preventing infestations of pests, including such pests as insects, mites, fungi, or parasites. The methods comprise the steps of prepg. a pesticidal compd., combining it with a carrier, and applying it to the affected area.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:127903 HCAPLUS

DOCUMENT NUMBER: 136:196894

TITLE: Antimicrobial activity profiles of the two enantiomers of limonene and **carvone** isolated from the oils of *Mentha spicata* and *Anethum sowa*

AUTHOR(S): Aggarwal, K. K.; Khanuja, S. P. S.; Ahmad, Ateeque; Kumar, T. R. Santha; Gupta, Vivek K.; Kumar, Sushil

CORPORATE SOURCE: Central Institute of Medicinal and Aromatic Plants, Lucknow, 226015, India

SOURCE: Flavour and Fragrance Journal (2002), 17(1), 59-63  
CODEN: FFJOED; ISSN: 0882-5734

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The antimicrobial activity of the essential oils of *Mentha spicata* L. and *Anethum sowa* Roxb. (Indian dill) were studied. The major chem. constituents of the hydrodistd. essential oils and their major isolates from cultivated *M. spicata* and *A. sowa* were identified by IR, 1H- and 13C-NMR and GC: (S)-(-)-limonene (27.3%) and (S)-(-)-**carvone** (56.6%) (representing 83.9% of the spearmint oil) and (R)-(+)-limonene (21.4%), dihydrocarvone (5.0%), (R)-(+)-**carvone** (50.4%) and dillapiole (17.7%) (together 76.9% in Indian dill oil), resp. In vitro bioactivity evaluation of the isolated oil components revealed that both the optical isomers of **carvone** were active against a wide spectrum of human pathogenic fungi and bacteria tested. (R)-(+)-limonene showed comparable bioactivity profile over the (S)-(-)-isomer. The activity of these monoterpene enantiomers was found to be comparable to the bioactivity of the oils in which they occurred.

IT 2244-16-8, (+)-**Carvone** 6485-40-1, (-)-**Carvone**

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antimicrobial activity of enantiomers of limonene and **carvone** and essential oils of *Mentha spicata* and *Anethum sowa*)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:854289 HCAPLUS

DOCUMENT NUMBER: 136:36684

TITLE: Potato sprout growth suppression by menthone and neomenthol, volatile oil components of *Minthostachys*, *Satureja*, *Bystropogon*, and *Mentha* species

AUTHOR(S): Coleman, Warren K.; Lonergan, Greg; Silk, Peter

CORPORATE SOURCE: Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, NB, E3B 4Z7, Can.

SOURCE: American Journal of Potato Research (2001), 78(5), 345-354

CODEN: AJPRFQ; ISSN: 1099-209X

PUBLISHER: Potato Association of America

DOCUMENT TYPE: Journal

LANGUAGE: English



AB The replacement of synthetic **pesticides** such as chlorpropham (CIPC) with effective potato sprout suppressants that have negligible environmental impact is needed due to increased concern for consumer health and safety. To date, however, only S-(+)-**carvone**, a monoterpene produced from caraway seeds, has been developed com. as a competitive product to CIPC. Consequently, the effects of menthone and neomenthol vapor were compared to S-(+)-**carvone** for sprout suppressant efficacy as well as for effects on sol. sugar levels, respiration, and processing quality during high and low temp. storage. In the majority of treatments, tubers were enclosed in 3.8 l glass jars at 25 C. Liq. test compds. were applied to a 10-cm-long .times. 2-cm-wide filter paper strip (Whatman No. 1) enclosed in each jar. Treatment with either menthone or S-(+)-**carvone** at 5 ul/liq./l of treatment vol. gave complete sprout suppression in non-dormant Russet Burbank tubers. An examn. of changes in CO2 output, glucose, or sucrose levels over 4 wk at 10 C indicated that the effects of menthone and S-(+)-**carvone** were similar. In addn., menthone significantly inhibited sprouting without adversely affecting the percentage glucose content or sucrose content when this compd. was applied at 4 ul/l to five-month-old, non-dormant tubers of AC Novachip, Russet Burbank, Shepody, and Snowden for two months at 10 C. Menthone and neomenthol were five to ten times more effective in suppressing tuber sprouting than S-(+)-**carvone** when applied together at 0.5 ul/l each.

IT **2244-16-8, S-(+)-Carvone**

RL: BSU (Biological study, unclassified); BIOL (Biological study) (potato sprout growth suppression by menthone and neomenthol, volatile oil components of Minthostachys, **Satureja**, Bystropogon, and Mentha species, as compared to)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:822451 HCAPLUS

DOCUMENT NUMBER: 135:340475

TITLE: Natural agrochemical fungicides for controlling mildew and anthracnose

INVENTOR(S): Usuta, Sadayoshi

PATENT ASSIGNEE(S): Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001316214	A2	20011113	JP 2000-139051	20000511
PRIORITY APPLN. INFO.:			JP 2000-139051	20000511

AB The **fungicides** comprise exts. or essential oils contg. thymol or its regioisomer **carvacrol** of **Labiatae** plants. Thus, Mosla chinensis Maxim ext. contg. 9.6 g thymol/100 g showed strong antifungal activity against Leveillula taurica, Sphaerotheca fuliginea, and Colletotrichum fragariae.

IT **499-75-2, Carvacrol**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(agrochem. **fungicides** contg. **Labiatae** plant exts. for controlling mildew and anthracnose.)

IT **89-83-8P, Thymol**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or

recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(agrochem. **fungicides** contg. **Labiatae** plant exts.  
for controlling mildew and anthracnose)

L18 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:740695 HCAPLUS  
DOCUMENT NUMBER: 127:328906  
TITLE: Seasonal variations in the chemical compositions of  
essential oils of selected aromatic plants growing  
wild in Turkey  
AUTHOR(S): Mueller-Riebau, Frank J.; Berger, Bernhard M.; Yegen,  
Oktay; Cakir, C.  
CORPORATE SOURCE: Institut fuer Pflanzenpathologie und Pflanzenschutz,  
Universitaet Goettingen, Goettingen, 37077, Germany  
SOURCE: Journal of Agricultural and Food Chemistry (1997),  
45(12), 4821-4825  
CODEN: JAFCAU; ISSN: 0021-8561  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The summer leaves of **Thymbra spicata** var.  
**spicata** and **Satureja thymbra**, two  
**Labiatae** arom. shrubs growing wild in the East Mediterranean  
region of Turkey, and, in addn., the leaves of *Salvia fruticosa*, *Mentha*  
*pulegium*, *Laurus nobilis*, and *Inula viscosa* were collected in 4-wk  
intervals to follow plant development and essential oil compn. The  
essential oils extd. from leaves (and flowering tops) were estd. during  
the growing season by means of GC-FID, and 19 terpenic constituents were  
identified. The changes in the essential oil content (quantity and  
compn.) varied for all six plant species, according to corresponding  
environmental and growth factors and the major adaptive strategy toward  
summer drought that each plant species has evolved. The concn. of the  
fungitoxic components in the essential oils of **Thymbra**  
**spicata** and **Satureja thymbra**, the phenolic  
constituents **carvacrol** and **thymol**, were low in the early phenol.  
stage and increased gradually with plant development. The max. was  
reached in June/July, shortly after flowering. Taking this into account,  
the harvest of these two species in order to obtain their essential oils  
offers acceptable economic possibilities for their use as a natural  
**fungicide**. The main compds. of the essential oils found in *Salvia*  
*fruticosa*, *Laurus nobilis*, and *Mentha pulegium* were the oxygen-contg.  
monoterpenes **1,8-cineole** and **pulegone**, resp., and a periodic  
increase and decrease in their concns. was obsd. The essential oil of  
*Inula viscosa* contained only small amts. of some of the investigated  
components. The best time of harvest to gain the essential oils with the  
highest active ingredients is July for **Thymbra spicata**  
, **Satureja thymbra**, *Salvia fruticosa*, and *Mentha*  
*pulegium* (**Labiatae**) and Sept. for *Laurus nobilis* (*Lauraceae*).

L18 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:403606 HCAPLUS  
DOCUMENT NUMBER: 125:51403  
TITLE: Eugenol and carvacrol: the main fungicidal compounds  
in clove and savory  
AUTHOR(S): Martini, H.; Weidenboerner, M.; Adams, S.; Kunz, B.  
CORPORATE SOURCE: Institut Lebensmitteltechnologie, Universitaet Bonn,  
Bonn, 53117, Germany  
SOURCE: Italian Journal of Food Science (1996), 8(1), 63-67  
CODEN: ITFSEY; ISSN: 1120-1770  
PUBLISHER: Chirioti  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Concns. of eugenol and carvacrol in ethanolic exts. of cloves and savory,

resp., were detd. quant. by GC. Both compds. were exclusively responsible for the antifungal action of these spices against *Cladosporium herbarum* and *Penicillium glabrum*. Other constituents showed no or insignificant activity.

L18 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:958216 HCAPLUS  
DOCUMENT NUMBER: 123:332775  
TITLE: Method for compounding pesticide-"kangchongling"  
INVENTOR(S): Huang, Jianbin; Lu, Qingming; Li, Zhixiong  
PATENT ASSIGNEE(S): Pingle Farm Chemical Plant, Guangxi, Peop. Rep. China  
SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 6 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1102540	A	19950517	CN 1994-103883	19940331
CN 1036824	B	19971231		

PRIORITY APPLN. INFO.: CN 1993-117036 19930831

AB The kangchongling **pesticide** is prepd. easily from dimehypo, shachongdan (Reg: 29547-00-0), and shidishui. The shidishui is a common medicine for summer ailments prepd. from seven ingredients, i.e. **camphor**, capsicum, **foeniculum**, shijiang, cinnamon, eucalyptus oil, and dahuang. The kangchongling is an highly effective **pesticide**.

IT 76-22-2, **Camphor**

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(method for compounding **pesticide**-kangchongling)

L18 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:714300 HCAPLUS  
DOCUMENT NUMBER: 123:93010  
TITLE: Chemical Composition and Fungitoxic Properties to Phytopathogenic Fungi of Essential Oils of Selected Aromatic Plants Growing Wild in Turkey  
AUTHOR(S): Mueller-Riebau, Frank; Berger, Bernhard; Yegen, Oktay  
CORPORATE SOURCE: Institut fuer Pflanzenpathologie und Pflanzenschutz, Universitaet Goettingen, Goettingen, 37077, Germany  
SOURCE: Journal of Agricultural and Food Chemistry (1995), 43(8), 2262-6  
CODEN: JAFCAU; ISSN: 0021-8561  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Essential oils of **Thymbra spicata**, **Satureja thymbra**, *Salvia fruticosa*, *Laurus nobilis*, *Mentha pulegium*, *Inula viscosa*, *Pimpinella anisum*, *Eucalyptus camaldulensis*, and *Origanum minutiflorum* plants growing wild in southern Turkey were investigated by means of GC-FID, and 20 components were identified. The main ones were .gamma.-terpinene, p-cymene, thymol, and **carvacrol** as well as 1,8-**cineole**, pulegone, and anethole. Biol. assays showed that fungitoxicity against the soil-borne plant disease-causing fungi *Fusarium moniliforme*, *Rhizoctonia solani*, *Sclerotinia sclerotiorum*, and *Phytophthora capsici* was due to different concns. of the phenolic fraction (esp. thymol and/or **carvacrol**) in the essential oils.

L18 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:645329 HCAPLUS  
DOCUMENT NUMBER: 119:245329

TITLE: In vitro antifungal activity of *Satureja montana* L. essential oil and its components  
 AUTHOR(S): Menghini, A.; Pagiotti, R.; Capuccella, M.  
 CORPORATE SOURCE: Dip. Biol. Veg., Univ. Perugia, Perugia, Italy  
 SOURCE: Rivista Italiana EPPOS (1992), 3(8), 3-7  
 CODEN: RIEPD7; ISSN: 0392-0445  
 DOCUMENT TYPE: Journal  
 LANGUAGE: French  
 AB *S. montana* L. essential oil was tested on *Trichophyton mentagrophytes*, *Trichoderma viride*, *Botrytis cinerea*, and *Aspergillus flavus*. The oil stopped mycelial proliferation by these spp. The inhibiting action of compds. of the oil (carvacrol, thymol, linalool, p-cymene, myrcene, limonene) was tested on *T. mentagrophytes*. Carvacrol showed a very strong antimycotic action. SEM and TEM observation showed effects on cellular structures.

L18 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:228106 HCAPLUS  
 DOCUMENT NUMBER: 118:228106  
 TITLE: The fungitoxicity of extracts of six selected plants from Turkey against phytopathogenic fungi  
 AUTHOR(S): Yegen, O.; Berger, B.; Heitefuss, R.  
 CORPORATE SOURCE: Akdeniz Univ., Antalya, 07003, Turk.  
 SOURCE: Zeitschrift fuer Pflanzenkrankheiten und Pflanzenschutz (1992), 99(4), 349-59  
 CODEN: ZPFPA; ISSN: 0340-8159  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German

AB Aq. exts. and essential oils of *Thymbra spicata*, *Satureja thymbra*, *Laura nobilis*, *Mentha spicata*, *Salvia fruticosa*, and *Inula viscosa* exhibited fungitoxicity against 4 phytopathogenic fungi. The essential oils of *T. spicata* and *S. thymbra* were most effective in inhibiting mycelial growth of the test fungi with min. inhibitory concns. 400-800 mg/L medium. The volatile phase of the essential oils was also effective, and the oils were more toxic against *Phytophthora capsici* than the fungicides carbendazim and pentachloronitrobenzene. TLC investigation implicated thymol and **carvacrol** as active compds.

L18 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:170621 HCAPLUS  
 DOCUMENT NUMBER: 106:170621  
 TITLE: Susceptibility of cereals to organochlorine pesticides  
 AUTHOR(S): Akbar, Sher; Rogers, Lyndon J.  
 CORPORATE SOURCE: Dep. Biochem. Agric. Biochem., Univ. Coll. Wales, Aberystwyth/Dyfed, SY23 3DD, UK  
 SOURCE: Pakistan Journal of Scientific and Industrial Research (1986), 29(6), 439-44  
 CODEN: PSIRAA; ISSN: 0030-9885  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB To investigate the genetic and biochem. basis of **pesticide** tolerance, cereal seedlings were sprayed with DDT [50-29-3] or toxaphene (I) [8001-35-2]. Chloroplasts were isolated 2 days after spraying and photosynthetic electron flow (DCPIP and ferricyanide photoredn.) was detd. as an index of injury. All varieties of oats (*Avena sativa*, *A. fatua*, *A. nuda*, and *A. strigosa*) were resistant to DDT, and most were susceptible to I. Most barley varieties (*Hordeum vulgare*, *H. deficiens*, *H. distichon*, and *H. irrugulare*) were sensitive to both DDT and I. Very few of the rye (*Secale cereale* and *S. segetale*) varieties, and none of the wheat (*Triticum aestivum* and *T. durum*), were susceptible to DDT; rye showed a mixed response to I, whereas wheat was mostly resistant. There was little sensitivity to DDT in maize,

but some varieties were susceptible to I. Although the mode of action of DDT and I is similar, differences in varietal response to the 2 **pesticides** suggests that different genes may be implicated in resistance.

L18 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1979:485262 HCAPLUS  
 DOCUMENT NUMBER: 91:85262  
 TITLE: Design and evaluation of a terrestrial model ecosystem for evaluation of substitute pesticide chemicals  
 AUTHOR(S): Metcalf, Robert L.; Cole, Larry K.; Wood, Susanne G.; Mandel, Douglas J.; Milbrath, Mary L.  
 CORPORATE SOURCE: Inst. Environ. Stud., Univ. Illinois, Urbana, IL, USA  
 SOURCE: Report (1979), EPA/600/3-79/004; Order No. PB-293167, 308 pp. Avail.: NTIS  
 From: Gov. Rep. Announce. Index (U. S.) 1979, 79(14), 64  
 DOCUMENT TYPE: Report  
 LANGUAGE: English  
 AB A terrestrial model ecosystem that was simple, inexpensive, and suitable for examg. the total environmental fate of radiolabeled **pesticides** in a soil crop model (e.g., soil-corn or soil-soybean) was accomplished with the practical development of a system in which corn or soybeans are grown on 3 kg of typical Illinois soil types contained in a 19-L wide-mouth glass carboy fitted with airtight lid and impingers to sample **pesticide** content in aspirated air, and a bottom petcock to sample leachate water. The units are housed in an environmental growth chamber under 12 h simulated daylight, at 26.degree.. The fate of the **pesticide** chem. and its degrdn. products in soil, air, water, phytoplankton, and in the major food chain organisms of the model ecosystems (e.g., Zea mays, Glycine max, Lumbricus terrestris, Limax maximus, Armadillidium **vulgare**, Estigmene acrea, and Microtus ochrogaster in the soil-plant phase, and Daphnia magna, Culex pipiens quinquefasciatus, Physa species, and Gambusia affinis in the leachate water) was traced. The C-labeled **pesticides** examd. included DDT [50-29-3], methoxychlor [72-43-5], aldrin [309-00-2], dieldrin [60-57-1], fonofos [944-22-9], phorate [298-02-2], parathion [56-38-2], methylparathion [298-00-0], simazine [122-34-9], trifluralin [1582-09-8], 2,4,5-T isooctyl ester [25168-15-4], hexachlorobenzene [118-74-1], pentachlorophenol [87-86-5], pentachloronitrobenzene [82-68-8], and captan [133-06-2].

=> d stat que

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR  
CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR  
CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL  
OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE  
OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL  
OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA  
L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFER  
A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR  
PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS  
OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM  
OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16  
L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19  
L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18  
L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

=>  
=>

=> d ibib abs hitrn l22 1-30

L22 ANSWER 1 OF 30. HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:458517 HCAPLUS

DOCUMENT NUMBER: 132:69047

TITLE: A comparative study of the essential oils from certain  
Mentha and Salvia species grown in Egypt

AUTHOR(S): Soliman, F. M.; El-Sohly, M. A.; Fathy, M. M.;  
El-Sakhawy, F. S.

CORPORATE SOURCE: Department of Pharmacognosy, Faculty of Pharmacy,  
Kasr-El-Ainy, Cairo, 11562, Egypt

SOURCE: Egyptian Journal of Pharmaceutical Sciences (   
1998), Volume Date 1997, 38(4-6), 553-564  
CODEN: EJPSBZ; ISSN: 0301-5068

PUBLISHER: National Information and Documentation Centre

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The compn. of the hydrodist. essential oils obtained from of the leaves  
of three Mentha species viz. *M. longifolia* L. (Huds.) subspecies *schimperii*,  
(Briq.) Harley, *M. piperita* L. and *M. spicata* L. and two samples  
of *Salvia officinalis* L. collected from different locations were analyzed  
by gas chromatog.-mass spectroscopic techniques (GC-MS). Piperitenone was  
the major constituent of *M. longifolia* L. oil (21.57%) followed by  
isoborneol (13.84%) and 1,8-cineole (11.63%). L-Menthone  
(22.91%) constituted the main component of *M. piperita* L. oil followed by  
cis-myrtanol (13.55%) and menthofuran (13.34%). While pulegone amounted  
42.54% of the essential oil of *M. spicata* L. followed by 1,8-  
cineole (13.45%). Concerning the essential oil of *S. officinalis*

L. (Giza), .alpha. - thujone (17.72%) was the major component followed by **camphor** (13.29%) and **1,8-cineole** (9.38%).  
**Camphor** (33.35%) constituted the main component of *S. officinalis* L. oil collected from Sinai followed by .alpha.-thujone (18.87%) and **1,8-cineole** (8.86%). Antimicrobial screening showed that *M. longifolia* L. (Huds.) oil has a powerful antimicrobial activity, while *M. spicata* L. showed a moderate activity. On the other hand, most of the tested microorganisms were resistant to *M. piperita* L. volatile oil. The essential oil of *S. officinalis* L. obtained from Sinai showed a powerful antimicrobial activity against most of the tested microorganisms. *S. officinalis* L. (Giza) showed only a slight antimicrobial activity.

IT 76-22-2, **Camphor** 79-92-5, **Camphene**  
 87-44-5, .beta.-**Caryophyllene** 89-83-8, **Thymol**  
 99-49-0, **Carvone** 140-67-0, **Estragole**  
 470-82-6, **1,8-Cineole** 499-75-2,  
**Carvacrol** 1139-30-6, **Caryophyllene** oxide  
 5794-03-6, (+)-**Camphene** 5948-04-9,  
 trans-Dihydrocarvone 6753-98-6, .alpha.-**Humulene**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (comparison of essential oils from certain *Mentha* and *Salvia* species  
 grown in Egypt)

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:110802 HCAPLUS  
 DOCUMENT NUMBER: 130:308935  
 TITLE: Fungitoxicity of essential oils of some aromatic  
 plants against sugarcane pathogens  
 AUTHOR(S): Singh, S. P.; Rao, G. P.; Upadhyaya, P. P.  
 CORPORATE SOURCE: Department of Botany, University of Gorakhpur,  
 Gorakhpur, 273009, India  
 SOURCE: Sugar Cane (Port Talbot, United Kingdom) (1998  
 ), (2), 14-17  
 CODEN: SUCAEE; ISSN: 0265-7406  
 PUBLISHER: International Media Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Essential oils extd. from various parts of eleven higher plants were  
 screened, in-vitro, for their fungitoxicity against a range of fungal  
 sugarcane pathogens. *Lippia alba* oil proved to be the most effective:  
 fungistatic against *Colletotrichum falcatum* and *C. pallescens* at 700 ppm  
 or less, and fungicidal at higher concns. against all the other test  
 pathogens (*Fusarium moniliforme*, *Ceratocystis paradoxa*, *Rhizoctonia*  
*solani*, *Curvularia lunata*, *Periconia atropurpurea* and *Epicoccum nigrum*).  
 Essential oils extd. from the leaves of *Ocimum canum* and the seeds of  
*Anethum graveolens* and *Pimpinella anisum* completely inhibited  
 all the test fungi at 3,000 ppm. *P. anisum* oil showed  
 fungicidal activity at 3,000 ppm against *Colletotrichum falcatum*, *R.*  
*solani* and *Colletotrichum paradoxa*. The fungitoxicity of *Lippia* oil was  
 thermostable and its toxicity remained unchanged on autoclaving and  
 storage for up to 300 days at 4.degree.C. The oil also proved superior to  
 certain synthetic com. **fungicides**. GC/MS anal. of *Lippia* oil  
 showed limonene (at 12.6%) and piperitone (at 19%) to be major chem.  
 constituents. Piperitone was found to be strongly toxic even at 200 ppm.

IT 87-44-5, **Caryophyllene** 470-82-6, **1,8-Cineole**

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (volatile components of *Lippia alba* Oil)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:661494 HCAPLUS

DOCUMENT NUMBER: 129:298375

TITLE: Antimicrobial prevention and treatment of human immunodeficiency virus and other infectious diseases

INVENTOR(S): Squires, Meryl

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 99 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9842188	A1	19981001	WO 1998-US5792	19980324 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6350784	B1	20020226	US 1997-824041	19970326
AU 9867718	A1	19981020	AU 1998-67718	19980324
AU 727339	B2	20001207		
BR 9807892	A	20000222	BR 1998-7892	19980324
EP 980203	A1	20000223	EP 1998-913086	19980324
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EE 9900436	A	20000417	EE 1999-436	19980324
NZ 500002	A	20010928	NZ 1998-500002	19980324
JP 2001527541	T2	20011225	JP 1998-545926	19980324
NO 9904639	A	19991124	NO 1999-4639	19990924
MX 9908750	A	20000331	MX 1999-8750	19990924
BG 63612	B1	20020731	BG 1999-103786	19991007
PRIORITY APPLN. INFO.:			US 1997-824041	A 19970326
			US 1996-600217	A2 19960212
			US 1996-646988	A2 19960508
			WO 1998-US5792	W 19980324

AB An improved medical treatment and medicine is provided to quickly and safely resolve HIV and other microbial infections. The inexpensive medicine can be self administered and maintained for the prescribed time. The attractive medicine comprises an antimicrobial conc. comprising microbe inhibitors, phytochems. or isolates. Desirably, the effective medicine comprises a surfactant and an aq. carrier or solvent and a nutrient. In the preferred form, the medicine comprises: Echinacea and Commiphora myrrha phytochems., benzalkonium chloride, a sterile water soln., and folic acid.

IT 87-44-5, Caryophyllene 97-53-0, Eugenol

104-55-2, Cinnamaldehyde 1139-30-6,

Caryophyllene epoxide

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antimicrobial prevention and treatment of human immunodeficiency virus and other infectious diseases)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L22 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:404566 HCAPLUS  
DOCUMENT NUMBER: 129:173042  
TITLE: Antibacterial activity of essential oils from aromatic plants growing in Chile  
AUTHOR(S): Montes, M. A.; Wilkomirsky, T.; Bello, H.  
CORPORATE SOURCE: Faculty of Pharmacy, University of Concepcion, Concepcion, Chile  
SOURCE: Fitoterapia (1998), 69(2), 170-172  
CODEN: FTRPAE; ISSN: 0367-326X  
PUBLISHER: IdB Holding SpA  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The antimicrobial activity and the chem. constituents of essential oils from flowering parts of *Mentha pulegium*, *Mentha spicata*, *Origanum vulgare*, and *Rosmarinus officinalis* were analyzed. All tested essential oils showed some degree of antimicrobial activity on the microorganisms used. *Origanum vulgare* essential oil was the most active, with a MBC90 of 7.4 mg/mL.

IT 76-22-2, Camphor 79-92-5, Camphene  
89-78-1, Menthol 99-49-0, Carvone  
470-82-6, Cineol 499-75-2, Carvacrol  
5392-40-5, Citral 5948-04-9, Dihydrocarvone  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(essential oil constituents from *Mentha*, *Origanum*, and *Rosmarinus*)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:362849 HCAPLUS  
DOCUMENT NUMBER: 129:71915  
TITLE: Relationship between bioactivity and chemical composition of commercial essential oils  
AUTHOR(S): Lis-Balchin, Maria; Deans, Stanley G.; Eaglesham, Elizabeth  
CORPORATE SOURCE: School of Applied Science, South Bank University, London, SE1 0AA, UK  
SOURCE: Flavour and Fragrance Journal (1998), 13(2), 98-104  
CODEN: FFJOED; ISSN: 0882-5734  
PUBLISHER: John Wiley & Sons Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB To establish the value of the use of biol. activities as accessory criteria (in conjunction with gas chromatog., but in the absence of enantiomeric anal.) for establishing the authenticity of essential oils, the biol. activities of 105 com. essential oils were studied against 25 species of bacteria, 20 strains of *Listeria monocytogenes*, and three filamentous fungi; their antioxidant action was also detd. and all the results were related to the actual chem. compn. of the oils as detd. by gas chromatog. The results showed some relation between the major components and some bioactivities. There was a neg. correlation between 1,8-cineole content and antifungal activity. There was, however, great variability between the biol. action of different samples of individual oils and groups of oils under the same general name, e.g. lavender, eucalyptus or chamomile, which was reflected in differences in chem. compn.. The results suggest that, although the biol. activities are not all related to the main components, any significant blending, rectification and adulteration of com. oils can be monitored by their biol. activities. The use of essential oils named simply as chamomile or eucalyptus, or any com. oil which was adulterated, cannot be justifiably

used in treating medical conditions unless the action is nonspecific and independent of the chem. compn.

IT **76-22-2P, Camphor**

RL: ADV (Adverse effect, including toxicity); ANT (Analyte); BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)

(relationship between bioactivity and chem. compn. of com. essential oils)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:197364 HCAPLUS

DOCUMENT NUMBER: 128:266235

TITLE: Antimicrobial treatment for herpes simplex virus and other infectious diseases

INVENTOR(S): Squires, Meryl

PATENT ASSIGNEE(S): Squires, Meryl, USA

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811778	A1	19980326	WO 1997-US2468	19970312 <--
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
US 6355684	B1	20020312	US 1996-646988	19960508
AU 9737153	A1	19980414	AU 1997-37153	19970312 <--
AU 716247	B2	20000224		
EP 918458	A1	19990602	EP 1997-933985	19970312
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
CN 1223546	A	19990721	CN 1997-195836	19970312
CN 1113599	B	20030709		
BR 9711086	A	20000111	BR 1997-11086	19970312
JP 2001505546	T2	20010424	JP 1998-514630	19970312
NO 9805200	A	19990108	NO 1998-5200	19981106
PRIORITY APPLN. INFO.:			US 1996-646988	A 19960508
			US 1990-595424	B1 19901011
			US 1996-600217	A2 19960212
			WO 1997-US2468	W 19970312

AB An improved medical treatment and medicine is provided to quickly and safely resolve herpes and other microbial infections. The inexpensive user-friendly medicine can be applied and maintained on the infected region until the phys. symptoms of the disease disappears and the patient is comfortable and has a normal appearance. The attractive medicine comprises an antimicrobial conc. comprising microbe inhibitors, phytochems., or isolates. Desirably, the effective medicine comprises a surfactant and an aq. carrier or solvent. In the preferred form, the medicine comprises Echinacea phytochems. and benzalkonium chloride in a

sterile water soln.  
 IT 87-44-5, **Caryophyllene** 87-44-5D,  
**Caryophyllene**, derivs. 1139-30-6, **Caryophyllene**  
 epoxide  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)  
 (antimicrobial treatment for herpes simplex virus and other infectious  
 diseases)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:130252 HCAPLUS

DOCUMENT NUMBER: 128:202929

TITLE: Research for the development of natural antimicrobial  
 materials. I. -antimicrobial activity and effective  
 constituents in *Mosla chinensis* Maxim

AUTHOR(S): Furuya, Tsutomu; Matsuura, Youichi; Mizobata, Satoshi;  
 Takahara, Sumio; Takahashi, Kazuhisa

CORPORATE SOURCE: Faculty of Science, Okayama University of Science,  
 Japan

SOURCE: Nippon Shokuhin Kagaku Gakkaishi (1997),  
 4(2), 114-119  
 CODEN: NSKGF4; ISSN: 1341-2094

PUBLISHER: Nippon Shokuhin Kagaku Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB In order to screen for natural antimicrobial compds., we carried out halo  
 tests filter paper disks against ten species of microorganisms at 500mg/mL  
 of exts. obtained from about two hundred plants. Although most exts. were  
 effective against bacteria, the methanol ext. of *Mosla chinensis* Maxim.  
 (Hosoba-yamajiso in Japanese. **Labiatae**) proved highly inhibitory  
 against not only bacteria but also yeast and fungi (Table 1).  
 Partitioning between H<sub>2</sub>O and three successive solvents, hexane, CHCl<sub>3</sub> and  
 EtOAc, and MIC\* testing against twenty-three species of microorganisms  
 revealed the hexane fraction to exhibit the strongest antimicrobial  
 activity. I.e., the MIC values with this fraction were found at the  
 lowest concn. and comparison of the diam. of zone inhibition at the same  
 concn., demonstrated the hexane fraction to exert the greatest effects  
 against almost all species of microorganisms. Plants of **Labiatae**  
 , esp. such as *Thymus*, *Origanum* and *Satureja* used as  
 spices and food additives, contain essential oils, whose constituents such  
 as thymol, **carvacrol** and eugenol are known to possess  
 antimicrobial activity. A comparison of antimicrobial activities using  
 the MIC test showed that the methanol ext. of *M. chinensis* was more  
 inhibitory against all species of microorganisms than that of *Th. vulgaris*.  
 In addn., thymol exhibited a wide spectrum of antimicrobial activities,  
 similar to these for *M. chinensis* (Table 2). Hexane fractions from the  
 leaves, stems flowers and roots of *M. Chinensis* collected during June to  
 August, were analyzed by GLC in order to det. their volatile constituents,  
 and thymol was detected in all fractions. The content of thymol in  
 leaves, 4.43-13.03% was overwhelmingly higher than in other parts, and  
 max. levels were obsd. in leaves collected in August (Table 3).  
 Furthermore, antimicrobial activities of exts. detd. by MIC testing were  
 proportional to the thymol content. In conclusion, constituents of the  
 hexane fraction contg. essential oils, are the main factors responsible  
 for antimicrobial activity of *M. chinensis*. The results further suggest  
 the participation of thymol in inhibitory effects against microorganisms.

IT 89-83-8, **Thymol** 499-75-2, **Carvacrol**

RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study,  
 unclassified); BUU (Biological use, unclassified); THU (Therapeutic use);  
 ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES

(Uses)

(research for development of natural antimicrobial materials in *Mosla chinensis maxim*)

L22 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:673976 HCAPLUS

DOCUMENT NUMBER: 127:328410

TITLE: Constituents and biological activities of volatile oil of some Lamiaceae plants as affected by irradiation

AUTHOR(S): Omer, E. A.; El-Bazza, Z. E.; Eggbo, Z. G.

CORPORATE SOURCE: Pharmaceutical Sciences Department, National Research Centre Dokki and National Centre for Radiation Research and Technology, Cairo, Egypt

SOURCE: Egyptian Journal of Horticulture (1997), 24(2), 175-196

CODEN: EJHCAE; ISSN: 0301-8164

PUBLISHER: National Information and Documentation Centre

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oils of sweet marjoram, spearmint and thyme herbs were extd. by hydrodistn. GLC anal. for the constituents of each essential oil were carried out. The essential oils were found to possess antifungal activities against two strains of *Aspergillus niger* and one strain of *Asp. ochraceus* and antibacterial activity against *Bacillus megaterium*, *B. pantothenicus* and *B. brevis*. The oils extd. from non-irradiated (control) herbs were found to inhibit the growth of radioresistant microbial strains. The oils from irradiated herbs have antiaflatoxic activities against *Asp. parasiticus* NRRI 3145. No significant change was noticed for antifungal and antiaflatoxic activities of essential oils extd. from herbs before and after exposure to gamma radiation.

IT 79-92-5, Camphene 87-44-5, .beta.-

Caryophyllene 89-83-8, Thymol 99-49-0,

Carvone 470-82-6, 1,8-Cineole 499-70-7

, Carvomenthone 499-75-2, Carvacrol 5948-04-9

, Dihydrocarvone

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(constituents and biol. activities of volatile oil of some Lamiaceae plants as affected by irradiation.)

L22 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:763827 HCAPLUS

DOCUMENT NUMBER: 126:79812

TITLE: Chemical composition and antimicrobial activities of two aromatic plants: *Origanum*

*majorana* L. and *O. compactum* Benth

AUTHOR(S): Charai, Malika; Mosaddak, Mahjouba; Faid, M.

CORPORATE SOURCE: Dep. Chim. Fac. Sci., Univ. Mohamed, Rabat, 1014, Morocco

SOURCE: Journal of Essential Oil Research (1996), 8(6), 657-664

CODEN: JEOREG; ISSN: 1041-2905

PUBLISHER: Allured

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oils obtained by steam distn. of *Origanum compactum* and *O. majorana*, which were grown in Morocco, were examd. by gas chromatog. to det. their major constituents. The major constituents of *O. compactum* were *carvacrol* (49.52%), p-cymene (21.22%) and gamma-terpinene (14.21%), while the major constituents of the *O. majorana* were linalool (32.68%) and terpinene-4-ol (32.30%). The oils, dried whole plants, and aq. exts. derived from the leaves were examd. for their antimicrobial activities on molds, yeasts and

bacteria. The Minimal Inhibitory Concn. (MIC) was detd. in every case. A total inhibition (100%) was obtained with the *O. compactum* oil at the concn. of 4 ppm on all the microbial species, while *O. majorana* oil totally inhibited yeasts and lactic acid bacteria at a concn. of 5 ppm. Aq. exts. of the two plants were less inhibitory than their essential oils. The entire plants were also inhibitory to some strains of yeasts, molds and bacteria, and *O. compactum* was more inhibitory than *O. majorana*.

IT 499-75-2, Carvacrol

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(chem. compn. and antimicrobial activities of *Origanum majorana* and *O. compactum* oils)

L22 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:607589 HCAPLUS

DOCUMENT NUMBER: 125:246102

TITLE: Process for removing unwanted lipophilic impurity or residue from drinks or vegetable preparations

INVENTOR(S): Kreuter, Matthias-Heinrich; Steiner, Rudolf

PATENT ASSIGNEE(S): Emil Flachsmann Ag, Switz.

SOURCE: Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 730830	A1	19960911	EP 1996-103445	19960306 <--
EP 730830	B1	20020206		
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CH 688604	A	19971215	CH 1995-629	19950306 <--
CH 689818	A	19991215	CH 1995-1621	19950602
AU 9647909	A1	19960919	AU 1996-47909	19960306 <--
AU 678929	B2	19970612		
ZA 9601817	A	19960930	ZA 1996-1817	19960306 <--
CN 1141205	A	19970129	CN 1996-106030	19960306 <--
IN 181360	A	19980530	IN 1996-CA408	19960306 <--
US 5906848	A	19990525	US 1996-611687	19960306
AT 212790	E	20020215	AT 1996-103445	19960306
PT 730830	T	20020731	PT 1996-96103445	19960306
ES 2093589	T3	20020916	ES 1996-103445	19960306
US 6024998	A	20000215	US 1998-208004	19981209

PRIORITY APPLN. INFO.: CH 1995-629 A 19950306  
CH 1995-1621 A 19950602  
US 1996-611687 A1 19960306

AB Lipophilic impurities or residues such as **pesticides**, org. solvents, arom. org. compds., etc. are removed from beverages and juices or plant exts. and preps. by mixing with a lipophilic phase to carry the lipophilic impurities and later sepn. of this phase from the desired product.

IT 72-43-5, Methoxychlor 1825-21-4, Pentachloroanisole

RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)

(process for removing unwanted lipophilic impurity or residue from drinks or vegetable preps.)

L22 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:998461 HCAPLUS

DOCUMENT NUMBER: 124:25417  
 TITLE: Antifungal activity of the essential oil of **Origanum syriacum** L.  
 AUTHOR(S): Daouk, Rasha K.; Dagher, Shawky M.; Sattout, Elsa J.  
 CORPORATE SOURCE: Faculty of Arts and Sciences, American University of Beirut, Beirut, Lebanon  
 SOURCE: Journal of Food Protection (1995), 58(10), 1147-9  
 CODEN: JFPRDR; ISSN: 0362-028X  
 PUBLISHER: International Association of Milk, Food and Environmental Sanitarians  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The volatile oil of the Lebanese Za'atar (**Origanum syriacum** L.) was characterized for its thymol and **carvacrol** content using gas-liq. chromatog. These two compds. constituted the major components of the oil and were present in equal proportions of 30% in the volatile oil extd. from the leaves and shoot tips of the **Origanum** plant during the preflowering stage. The percentage of **carvacrol** in the essential oil increased to 62% after flowering and maturation, while the concn. of thymol decreased to 14%. **Origanum** oil extd. from plants collected during midseason was evaluated for its antifungal activity against *Aspergillus niger*, *Fusarium oxysporum*, and *Penicillium* species. The oil exhibited strong inhibitory action against the three fungi tested. The min. inhibitory concn. (MIC) of the oil was found to be 0.1 .mu.l/mL of yeast ext. sucrose broth for the fungi tested. It is concluded that the essential oil of Lebanese Za'atar is a potent mold inhibitor which can be employed as a food preservative.  
 IT 89-83-8, Thymol 499-75-2, **Carvacrol**  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (antifungal activity of the essential oil of **Origanum syriacum**)  
 L22 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:831372 HCAPLUS  
 DOCUMENT NUMBER: 123:220772  
 TITLE: Characterization of fungistatic and bacteriostatic activities of four essential oils rich in lactones (Elecampane, Catnip, Eupatorium cannabinum, Tansy)  
 AUTHOR(S): Perineau, F.; Bourrel, C.; Gaset, A.  
 CORPORATE SOURCE: Lab. Chimie Agroressources, Ecole Natl. Superieure Chime Toulouse, Toulouse, 31077, Fr.  
 SOURCE: Rivista Italiana EPPOS (1993), 4(Spec. Num.), 695-703  
 CODEN: RIEPD7; ISSN: 0392-0445  
 PUBLISHER: Rivista Italiana EPPOS  
 DOCUMENT TYPE: Journal  
 LANGUAGE: French  
 AB Research of natural products with biol. activity, led to test the activity of several essential oils towards five bacteria (according to the AFNOR NFT 72-150 std.) and seven pathogen fungi. In a preliminary test the authors studied the chem. compn. of the essential oils which are slightly known: Elecampane (*Inula helenium*) has sesquiterpenoid lactones as alantolactone, isoolantolactone, dihydroalantolactone and other minority isomers which represent up to 80% of the oil, - Catnip (*Nepeta cataria*) has nepetalactones (about 70% of hydrodistd. compds.), - Eupatorium cannabinum, with 4 g. of lactones, extd. from 1 kg of raw material, among which, eupatolide and alantolactones also found in Elecampane, - Tansy (*Tanacetum vulgare*), from which can be extd. 6 g of lactones per kg of fresh plant, principally parthenolide. These 4 plants and more particularly the different lactones reported, have been considered for

their bacteriostatic and fungistatic activities. The biostatic activity variation will be correlated to the chem. compn. and to the different sesquiterpenoid lactones of the studied essential oils. The activity levels (minimal inhibitory concns.) are found between 67.5 and 2000  $\mu\text{g/mL}$  according to the strains and are comparable to oils or constituents known to be active like essential oils of Eucalyptus (*Eucalyptus globulus*), Thyme (*Thymus vulgaris*), Clary sage (*Salvia sclarea*), and Eugenol, **Citral**, p-cymene, **Camphor**.

IT **546-43-0**, Alantolactone

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(fungistatic and bacteriostatic activities of essential oils rich in)

L22 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:831359 HCAPLUS

DOCUMENT NUMBER: 123:220771

TITLE: Antifungal activity of **carvacrol** chemotypes of winter savory harvested in central Italy

AUTHOR(S): Menphini, Alessandro; Pagiotti, Rita; Capuccella, Marinella

CORPORATE SOURCE: Dep. Plant Biol., Inst. Micrology, Perugia, 06121, Italy

SOURCE: Rivista Italiana EPPOS (1993), 4(Spec. Num.), 566-71

CODEN: RIEPD7; ISSN: 0392-0445

PUBLISHER: Rivista Italiana EPPOS

DOCUMENT TYPE: Journal

LANGUAGE: French

AB It has been shown that a large no. of plants possess antifungal activity. In the present study the authors report on the activity of the essential oil of winter savory (**Satureja montana** L., **Labiatae**) harvested in four localities of Central Italy, where this species is well-known for its domestic use in the kitchen as well as in traditional medical treatment (antiseptic, expectorant, anthelmintic, carminative, stomachic, stimulant). The essential oil was obtained by hydrodistn. of flowers and leaves from plants in full bloom. The oil compds. were analyzed by GC. **Carvacrol** represented 25-40% of the oil compn. In accordance with other Italian chemotypes.1,2,3. The essential oil was tested against *Candida albicans*, *Trichophyton menthagrophytes*, *Trichoderma viride*, *Mucor plumbeus* and *Botrytis cinerea*. For the study of antifungal activity, Sabouraud medium (Biolife) was used. Cultures were grown at 25.degree.. Diams. of the inhibition zones were recorded after incubation for 24 and 48 h. Each test was repeated twice. Light and TEM-SEM morphol. modifications were also obsd. The screening for antifungal activity appeared to exert a strong effect as quantities of oil less than 3  $\mu\text{L}$  oil were found sufficiently potent to inhibit the growth of all the colonies within 48 h. The essential oil of *S. montana* definitely halted mycelium proliferation. The activity of some essential oil compds. (**carvacrol**, thymol, linalool, p-cymene, etc.) was tested. **Carvacrol** showed a very strong antifungal action at 0.1  $\mu\text{L}$ . The light and ultrastructural observations showed morphol. modifications of the colonies and alterations of the cytol. structures. The results on the antifungal action of *S. montana* are promising. Now the authors plan to test *S. montana* essential oil at lower concns. and by different methods of treatment. However, the demonstrated antimycotic activity of *S. montana* essential oil could explain the use of this species in folk medicine due to its antiseptic properties.

IT **89-83-8**, Thymol **499-75-2**, **Carvacrol**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(antifungal activity of essential oil of winter savory)

L22 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:649331 HCAPLUS  
 DOCUMENT NUMBER: 123:52084  
 TITLE: Antifungal properties of essential oils and their main components upon *Cryptococcus neoformans*  
 AUTHOR(S): Viollon, Catherine; Chaumont, Jean-Pierre  
 CORPORATE SOURCE: Laboratory Botany, Faculty Medicine and Pharmacy, Besancon, Fr.  
 SOURCE: Mycopathologia (1994), 128(3), 151-3  
 CODEN: MYCPAH; ISSN: 0301-486X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB *Cryptococcus neoformans* opportunistic fungus present in the last phases of AIDS is inhibited in vitro by several essential oils on natural volatile compds. The minimal inhibitory concn. may reach 100 .mu.l/L and the minimal fungicidal concn. 200 .mu.l/l with palmarosa or cinnamon oil. Among phenolic compds., thymol and **carvacrol** were the most fungitoxic. Terpenoids, **citral**, geraniol, and citronellol showed the best activities.  
 IT 89-83-8, Thymol 97-53-0, Eugenol 99-49-0, **Carvone** 499-75-2, **Carvacrol** 5392-40-5, **Citral**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antifungal properties of essential oils and their main components on *Cryptococcus neoformans*)

L22 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:475187 HCAPLUS  
 DOCUMENT NUMBER: 122:238209  
 TITLE: Antifungal activity of oregano and thyme essential oils applied as fumigants against fungi attacking stored grain  
 AUTHOR(S): Paster, Nachman; Menasherov, Mazal; Ravid, Uzi; Juven, Benjamin  
 CORPORATE SOURCE: Department of Stored Products, Volcani Center, Bet Dagan, 50250, Israel  
 SOURCE: Journal of Food Protection (1995), 58(1), 81-5  
 CODEN: JFPRDR; ISSN: 0362-028X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Essential oils from oregano and thyme were applied for 24 h as fumigants against the mycelia and spores of *Aspergillus flavus*, *Aspergillus niger* and *Aspergillus ochraceus*, as well as against natural microflora of wheat grains. The minimal inhibitory concn. (MIC) of oregano oil needed to inhibit the mycelial growth of the fungi was 2.0 .mu.L/L, while spores were eradicated following exposure to 2.0 to 2.5 .mu.L/L. The thyme essential oil was less efficient in controlling mycelia and growth was obsd. even following exposure to 4.0 .mu.L/L. However, the thyme essential oil was fungitoxic to spores (MIC= 3.0 .mu.L/L). In another set of trials the efficacy of the oils and two of their constituents (**carvacrol** and thymol) in controlling natural microflora of surface-sterilized wheat grain was studied. Of the four materials investigated, only oregano essential oil exhibited fungicidal activity and, following 24 h exposure to 20 .mu.L/L, a significant redn. in the percent of infested grain was obsd. even after 5 days of incubation on potato dextrose agar. A redn. in the germinability of the grains was evident following exposure to the materials tested. When the fungicidal activity of oregano essential oil was evaluated using grains with different moisture contents (MC), data revealed that the better inhibitory effect was achieved in grain with a high MC. The findings emphasize the toxicity of oregano and thyme essential oils as fumigants against fungi



attacking stored grain and strengthen the possibility of using them as an alternative to chems. for preserving stored grains.

IT 89-83-8, Thymol 499-75-2, Carvacrol

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(antifungal activity of oregano and thyme essential oils applied as fumigants against fungi attacking stored grain)

L22 ANSWER 16 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:185107 HCAPLUS

DOCUMENT NUMBER: 122:16942

TITLE: Extracts and fractions of *Thymus capitatus* exhibit antimicrobial activities

AUTHOR(S): Kandil, O.; Radwan, N. M.; Hassan, A. B.; Amer, A. M. M.; El-Banna, H. A.; Amer, W. M. M.

CORPORATE SOURCE: Harvard Medical School, Deaconess Hospital, Boston, MA, USA

SOURCE: Journal of Ethnopharmacology (1994), 44(1), 19-24

CODEN: JOETD7; ISSN: 0378-8741

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Preliminary phytochem. screening of the plant *T. capitatus*

exhibited the presence of saponins, resins, flavonoids, essential and fixed oils. Aq. and ethanolic exts. (10-200 mg/mL) as well as saponin, resin and essential oil of the plant (10-5000 .mu.g/mL) inhibited the growth of several bacteria and fungi.

IT 89-83-8, 2-Isopropyl-5-methylphenol 499-75-2,

2-Methyl-5-isopropylphenol

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(exts. and fractions of *Thymus capitatus* exhibit antimicrobial activities)

L22 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:330907 HCAPLUS

DOCUMENT NUMBER: 120:330907

TITLE: Antimicrobial activity and chemical composition of essential oils from Sicilian aromatic plants

AUTHOR(S): Biondi, Daniela; Cianci, Paola; Geraci, Corrada; Ruberto, Giuseppe

CORPORATE SOURCE: Ist. Stud. Sostanze Nat. Interesse Aliment.

Chim.-Farm., CNR, Valverde, I-95028, Italy

SOURCE: Flavour and Fragrance Journal (1993), 8(6), 331-7

CODEN: FFJOED; ISSN: 0882-5734

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oils from 4 Lamiaceae (*Labiatae*), *Origanum*

*onites*, *Thymus capitatus*, com. oregano and sage, and a Lauracea, *Laurus nobilis* were characterized and tested against 8 bacteria (*Bacillus subtilis*, *Escherichia coli*, *Hafnia alvei*, *Micrococcus luteus*, *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Streptococcus faecalis*), and 5 fungi (*Aspergillus niger*, *A. terreus*, 2 strains of *Candida albicans*, *Fusarium* sp.). The highest and broadest activity, both antibacterial and antifungal, was shown by the oils of *O. onites*, *T. capitatus* and com. oregano, in that order, while oils from com. sage and *L. nobilis* were almost inactive. Bactericidal and bacteriostatic properties of the 5 essential oils are also discussed.

IT 76-22-2, Camphor 79-92-5, Camphene

87-44-5, **Caryophyllene** 89-83-8, Thymol  
 97-53-0, Eugenol 99-49-0, **Carvone**  
 470-82-6, 1,8-Cineole 499-75-2,  
**Carvacrol** 1076-56-8, Thymol methylether  
 1139-30-6, **Caryophyllene** oxide 6379-73-3,  
**Carvacrol** methylether 6380-28-5, Carvacryl acetate  
 6753-98-6, .alpha.-Humulene 13466-78-9, 3-**Carene**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); BIOL (Biological study)  
 (of essential oils, from Sicilian arom. plants, antimicrobial activity  
 of)

L22 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:200249 HCAPLUS  
 DOCUMENT NUMBER: 120:200249  
 TITLE: Composition and antimicrobial properties of essential  
 oils of four Mediterranean Lamiaceae  
 AUTHOR(S): Panizzi, L.; Flamini, G.; Cioni, P.L.; Morelli, I.  
 CORPORATE SOURCE: UO, Serv. Multizonale Prev. USL 13, Livorno, 57100,  
 Italy  
 SOURCE: Journal of Ethnopharmacology (1993), 39(3),  
 167-70  
 CODEN: JOETD7; ISSN: 0378-8741  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Essential oils from **Satureja** montana, Rosmarinus officinalis,  
 Thymus vulgaris, and Calamintha nepeta, were chem. analyzed and their  
 antimicrobial and **fungicide** activities evaluated on the basis of  
 their min. inhibitory concn. and min. bactericidal concn. All 4 oils had  
 a biotoxic effect, the most active being those from Calamintha and Thymus.

IT 76-22-2, **Camphor** 79-92-5, **Camphene**  
 87-44-5, .beta.-**Caryophyllene** 89-78-1, Menthol  
 89-83-8, Thymol 99-49-0, **Carvone**  
 470-82-6, 1,8-Cineol 499-75-2,  
**Carvacrol**  
 RL: BIOL (Biological study)  
 (of Mediterranean Lamiaceae oils, antimicrobial activity in relation  
 to)

L22 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:404262 HCAPLUS  
 DOCUMENT NUMBER: 117:4262  
 TITLE: Wild thyme, Thymus **capitatus**, essential oil  
 seasonal changes and antimycotic activity  
 AUTHOR(S): Arras, G.; Grella, G. E.  
 CORPORATE SOURCE: Ist. Stud. Probl. Bio-Agron. Colt. Arboree Mediterr.,  
 CNR, Sassari, 07100, Italy  
 SOURCE: Journal of Horticultural Science (1992),  
 67(2), 197-202  
 CODEN: JHSCA8; ISSN: 0022-1589  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Monthly quant. and qual. changes in the essential oils of Thymus  
**capitatus**, growing wild in Sardinia, were studied over the two  
 years 1987-1988, and their antimycotic activity against Penicillium  
 italicum and Alternaria alternata was examd. Max. oil yield occurred in  
 August, but depended upon whether leaves, flowers or residual  
 infructescences were used. Of the eight constituents identified, the  
 biogenetically related **carvacrol**, p-cymene and .gamma.-terpinene  
 showed changes related to the different growth stages of the season, with  
**carvacrol** levels at a max. (70-80%) before and until after  
 flowering (Apr.-Sept.); the flowers and residual infructescence contained  
 more than the leaves. The oil proved to be fungistatic to P. italicum and

fungicidal at 400 ppm to *A. alternata* in August 1987 and 1988. Fungitoxic effects were mainly due to **carvacrol**, but not always in proportion to its content in the oil.

IT 87-44-5, **Caryophyllene** 499-75-2,  
**Carvacrol**

RL: BIOL (Biological study)

(of *Thymus capitatus*, seasonal changes in content of,  
antimycotic activity in relation to)

L22 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:174054 HCAPLUS

DOCUMENT NUMBER: 112:174054

TITLE: Nematocidal activity of some essential plant oils

AUTHOR(S): Sangwan, Naresh K.; Verma, Braham S.; Verma, Kailash K.; Dhindsa, Kuldip S.

CORPORATE SOURCE: Dep. Chem. Biochem., Haryana Agric. Univ., Hisar, 125 004, India

SOURCE: Pesticide Science (1990), 28(3), 331-5  
CODEN: PSSCBG; ISSN: 0031-613X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Nematocidal activity of the essential oils of different plant species belonging to the families **Labiatae** (*Ocimum basilicum*, *O. sanctum* and *Mentha piperita*), **Myrtaceae** (*Callistemon lanceolatus* and *Eugenia caryophyllata*) and **Gramineae** (*Cymbopogon caesius*) and their major monoterpenoidal constituents, linalool, eugenol, menthol, **cineole** and geraniol was detd. against second-stage juveniles of seed-gall nematode (*Anguina tritici*), citrus nematode (*Tylenchulus semipenetrans*), root-knot nematode (*Meloidogyne javanica*) and pigeon pea cyst nematode (*Heterodera cajani*). The essential oil of *E. caryophyllata* and its major constituent eugenol, as well as linalool and geraniol, exhibited non-specific activity against all the four nematodes tested.

IT 97-53-0, **Eugenol** 470-82-6, **Cineole**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(nematocidal activity of)

L22 ANSWER 21 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:611783 HCAPLUS

DOCUMENT NUMBER: 111:211783

TITLE: Phytochemical and antimicrobial analysis of essential oils

AUTHOR(S): Hethelyi, E.; Koczka, I.; Tetenyi, P.

CORPORATE SOURCE: Res. Inst. Med. Plants, Budakalasz, 2011, Hung.

SOURCE: Herba Hungarica (1989), 28(1-2), 99-115  
CODEN: HEHUAW; ISSN: 0018-0580

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The compn. and antimicrobial activity of a no. of Hungarian medicinal oils was studied. All oils were gram-pos. selective. Six of 9 oil samples caused 92-100% inhibition of the multiplication of gram-pos. bacterial. The oils also had excellent antifungal activity. Oils contg. ketones (e.g., 3-octanone, artemisia ketone, dihydrotageton, tageton, ocimenone, verbenone, umbellulone, piperitone, piperitenone, and **camphor**) and alcs. (e.g., artemisia alc., chrysanthanol, borneol, or myrtenol) showed excellent antimicrobial activity.

IT 87-44-5, **.beta.-Caryophyllene**

RL: BIOL (Biological study)

(of *Tagetes patula* oil and *Rosmarinus officinalis* oils)

IT 140-67-0, **Estragol**

RL: BIOL (Biological study)

(of *Artemisia dracunculus* oil)

IT 76-22-2, **Camphor** 470-82-6, 1,8-**Cineol**

RL: BIOL (Biological study)  
(of Rosmarinus officinalis oil)

L22 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:141367 HCAPLUS  
DOCUMENT NUMBER: 110:141367  
TITLE: GC/MS investigation of antimicrobial and repellent compounds  
AUTHOR(S): Hethelyi, E.; Tetenyi, P.; Kaposi, P.; Danos, B.; Kernoczi, Zs.; Buki, Gy.  
CORPORATE SOURCE: Res. Inst. Med. Plants, Budakalasz, Hung.  
SOURCE: Herba Hungarica (1988), 27(2-3), 89-105  
CODEN: HEHUAW; ISSN: 0018-0580  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Chemotypes of *Tanacetum vulgare* of Hungary were identified and carveol, dihydrocarvone, umbellulone, 1,8-cineol, terpinen-4-ol, thymol, and .beta.-terpinyl acetate were identified. Various *Tagetes* oils were analyzed, and limonene, .alpha.-terpinolene, dihydrotageton, and ocimenone were identified. The oils inhibited gram pos. bacteria and fungi. Thienyl compds. which show insecticidal and repellent effects were identified in flowers and roots of *Tagetes*.

IT 87-44-5

RL: BIOL (Biological study)  
(of *Tagetes* oils)

IT 89-83-8, Thymol 470-82-6, 1,8-Cineole

5948-04-9, Dihydrocarvone

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)

(of *Tanacetum vulgare*)

L22 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:92122 HCAPLUS  
DOCUMENT NUMBER: 110:92122  
TITLE: Biological activity of some Malaysian plant extracts  
AUTHOR(S): Sukari, Mohd Aspollah; Takahashi, Shozo  
CORPORATE SOURCE: Fac. Sci. Environ. Stud., Univ. Pertanian Malaysia, Upm Serdang, 43400, Malay.  
SOURCE: Pertanika (1988), 11(2), 249-53  
CODEN: PERTDY; ISSN: 0126-6128  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Exts. from 3 Malaysian plants (*Labiatae*, including *Ocimum sanctum*, *Mentha arvensis*, and *Orthosiphon staminea*, were investigated for their biol. activity. The volatile fraction of each plant was isolated and the major components were characterized by gas chromatog. (GC), GC-mass spectrometry, and NMR. The antibacterial, antifungal, and insecticidal activity, and inhibition of the germination by the volatile fraction and residue were studied.

IT 87-44-5, .beta.-Caryophyllene 97-53-0, Eugenol

RL: BIOL (Biological study)

(of Malaysian *Labiatae*, biol. activity in relation to)

L22 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:466223 HCAPLUS  
DOCUMENT NUMBER: 105:66223  
TITLE: Essential oil of *Thymus bovei* Benth  
AUTHOR(S): Aboutabl, E. A.; Soliman, F. M.; El-Zalabani, S. M.; Brunke, E. J.; El-Kersh, T. A.  
CORPORATE SOURCE: Dep. Pharmacogn., Fac. Pharm., Cairo, 11562, Egypt  
SOURCE: Scientia Pharmaceutica (1986), 54(1), 43-8  
CODEN: SCPHA4; ISSN: 0036-8709  
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oil of the flowering herb of *T. bovei* Benth. (**Labiatae**) growing in Sinai was analyzed using capillary gas chromatog.-mass spectrometry. Thirty-four components were identified in the chromatogram of the oil. Phenols and phenolic derivs. constitute 75.6% of the oil, thymol [**89-83-8**] being the major component (68.4%). The oil showed a broad and powerful antimicrobial activity. It is effective against *Staphylococcus aureus*, *Mycobacterium phlei*, *Bacillus subtilis*, *Escherichia coli*, *Neisseria* species and *Candida albicans*.

IT **79-92-5 87-44-5 89-83-8 106-26-3**  
**141-27-5 470-82-6 499-75-2 1076-56-8**  
**1139-30-6 6380-28-5 13466-78-9**  
 RL: BIOL (Biological study)  
 (of *Thymus bovei* oil)

L22 ANSWER 25 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:10348 HCAPLUS  
 DOCUMENT NUMBER: 104:10348  
 TITLE: Composition of the essential oil of **Origanum majorana** grown in different localities in Turkey  
 AUTHOR(S): Sarer, E.; Scheffer, J. J. C.; Janssen, A. M.; Svendsen, A. Baerheim  
 CORPORATE SOURCE: Fac. Pharm., Ankara Univ., Ankara, Turk.  
 SOURCE: Essent. Oils Aromat. Plants, Proc. Int. Symp., 15th (1985), Meeting Date 1984, 209-12. Editor(s): Baerheim-Svendsen, A.; Scheffer, J. J. C. Nijhoff/Junk: Dordrecht, Neth.  
 CODEN: 54LGAU  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English

AB Compn. of *O. majorana* grown in different localities in Turkey differed in the content of main components, **carvacrol** [**499-75-2**] and thymol [**89-83-8**] (48-74% and 0.5-4%, resp.). The oils were also tested against bacteria, yeast, and some fungi, and a remarkable effect against fungi was obsd.

IT **79-92-5 89-83-8 99-49-0 470-82-6**  
**499-75-2 554-61-0 1195-79-5 13466-78-9**  
 RL: BIOL (Biological study)  
 (of *Origanum majorana* oil, of Turkey)

L22 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1982:91465 HCAPLUS  
 DOCUMENT NUMBER: 96:91465  
 TITLE: Study of chemotaxons of *Tanacetum vulgare* L. for their antimicrobial effect  
 AUTHOR(S): Tetenyi, P.; Hethelyi, E.; Kulcsar, G.; Kaposi, P.  
 CORPORATE SOURCE: Gyogynoveny Kut. Intez., Budakalasz, Hung.  
 SOURCE: Herba Hungarica (1981), 20(1-2), 57-74  
 CODEN: HEHUAW; ISSN: 0018-0580  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Hungarian

AB The essential oils of 12 chemotaxonically-different clones of *T. vulgare* were tested against 19 bacterial and 16 fungal species. Eight oils were 85-90% effective bactericides at 100 .mu.g/mL, and at 50 .mu.g/mL, all oils were 100% fungicidal. The compn. of the oils is given.

IT **76-22-2 470-82-6**  
 RL: BIOL (Biological study)  
 (of *Tanacetum vulgare* oil, bactericidal and fungicidal activity in relation to)

L22 ANSWER 27 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1961:66970 HCAPLUS

DOCUMENT NUMBER: 55:66970  
 ORIGINAL REFERENCE NO.: 55:12743e-g  
 TITLE: Action of odoriferous organic chemicals and essential oils on wood-destroying fungi  
 AUTHOR(S): Maruzzella, Jasper C.; Scrandis, Denis; Scrandis, Joseph B.; Grabon, George  
 CORPORATE SOURCE: Long Island Univ., Brooklyn, NY  
 SOURCE: Plant Disease Reporter (1960), 44, 789-92  
 CODEN: PLDRA4; ISSN: 0032-0811

DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB When 193 aromatic agents (115 essential oils and 78 org. compds.) were screened in vitro against 3 wood-destroying fungi by the filter paper disk method, 72% of the essential oils and 73% of the org. chemicals produced zones of inhibition against at least 1 of the test organisms. Prominent zones of inhibition were produced by oils of garlic (imported), **origanum** (rectified water white), thyme red, cassia, and styrax; also by hydratropaldehyde, isovaleric acid, caproic acid, cinnamaldehyde, and eugenol. Some of these agents might be of value in the wood preserving industry.

IT 97-53-0, Eugenol 100-06-1, Acetophenone, 4'-methoxy-101-39-3, Cinnamaldehyde, .alpha.-methyl- 103-95-7, Hydrocinnamaldehyde, p-isopropyl-.alpha.-methyl- 104-53-0, Hydrocinnamaldehyde 104-55-2, Cinnamaldehyde 123-11-5, p-Anisaldehyde  
 (as wood **fungicide**)

L22 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1960:56986 HCAPLUS  
 DOCUMENT NUMBER: 54:56986  
 ORIGINAL REFERENCE NO.: 54:11136c-d  
 TITLE: The action of essential oils on phytopathogenic fungi  
 AUTHOR(S): Maruzzella, Jasper C.; Balter, Jerry  
 CORPORATE SOURCE: Long Island Univ., Brooklyn, NY  
 SOURCE: Plant Disease Reporter (1959), 43, 1143-7  
 CODEN: PLDRA4; ISSN: 0032-0811

DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB The in vitro activity of 119 essential oils was tested against 12 phytopathogenic fungi by the filter-paper disk method. Antifungal activity against at least 2 of the 12 test organisms was shown by 100 of the oils. The greatest zones of inhibition were produced by oils of onion, garlic, thyme white, thyme red, **origanum** rectified (water white), **origanum**, bay, lemongrass, sweet birch (northern), and Bois de Rose. All active oils killed the most sensitive organism, Claviceps purpurea, and 58% were active against the least sensitive, Alternaria tenuis.

L22 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1958:58271 HCAPLUS  
 DOCUMENT NUMBER: 52:58271  
 ORIGINAL REFERENCE NO.: 52:10507a-b  
 TITLE: The in vitro antifungal activity of essential oils  
 AUTHOR(S): Maruzzella, Jasper C.; Ligouri, Laurence  
 CORPORATE SOURCE: Long Island Univ., Brooklyn, NY  
 SOURCE: Journal of the American Pharmaceutical Association (1912-1977) (1958), 47, 250-4  
 CODEN: JPHAA3; ISSN: 0003-0465

DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB The in vitro antifungal activity of 92 volatile, 12 terpeneless, and 3 fixed oils was detd. by the filter paper disk method. **Origanum** (red), lemongrass (imported), thyme (red), sweet birch, savory select,

coriander, sassafras, cinnamon, laurel leaves (distd.), and chenopodium had the greatest antifungal activity while among the terpeneless oils, cinnamon, caraway, dill, and anise were the most active. The fixed oils tested were ineffective.

IT 104-46-1, Anethole  
(as **fungicide**)

L22 ANSWER 30 OF 30 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1954:66097 HCAPLUS  
DOCUMENT NUMBER: 48:66097  
ORIGINAL REFERENCE NO.: 48:11730f-g  
TITLE: Antimolding agents for sirups  
AUTHOR(S): Lord, Clifton F., Jr.; Husa, William J.  
CORPORATE SOURCE: Univ. of Florida, Gainesville  
SOURCE: Journal of the American Pharmaceutical Association  
(1912-1977) (1954), 43, 438-40  
CODEN: JPHAA3; ISSN: 0003-0465  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB The antimolding effectiveness of more than 200 substances was detd. by using mycophil agar inoculated with microorganisms from deteriorated sirup. Many of the compds., including certain flavoring and perfumery materials, were more active than BzOH (I) and the esters of p-hydroxybenzoic acid. In comparison with I which was effective at 1:1000 concn., cinnamaldehyde was effective at 1:10,000, and quinolinol sulfate at 1:100,000.

IT 104-55-2, Cinnamaldehyde  
(as **fungicide** for sirup)

IT 91-64-5, Coumarin 97-53-0, Eugenol 104-46-1,  
Anethole 106-23-0, Citronellal 141-92-4,  
Octanal, 7-hydroxy-3,7-dimethyl-, dimethyl acetal 470-82-6,  
Cineole 5392-40-5, Citral  
(as **fungicide** for sirups)

IT 76-22-2, Camphor  
(as **fungicides** for sirups)

=> select hit rn 118 1-13  
E1 THROUGH E7 ASSIGNED

=> select hit rn 122 1-30  
E8 THROUGH E44 ASSIGNED

=> fil reg  
FILE 'REGISTRY' ENTERED AT 11:20:17 ON 23 APR 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 21 APR 2004 HIGHEST RN 676437-01-7  
DICTIONARY FILE UPDATES: 21 APR 2004 HIGHEST RN 676437-01-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more

information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
=>

=> d his 123

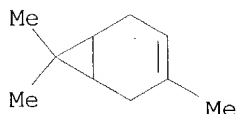
(FILE 'HCAPLUS' ENTERED AT 11:11:59 ON 23 APR 2004)  
 SELECT HIT RN L18 1-13  
 SELECT HIT RN L22 1-30

FILE 'REGISTRY' ENTERED AT 11:20:17 ON 23 APR 2004  
 L23 39 S E1-E44

=>  
=>

=> d ide can 123 1-39

L23 ANSWER 1 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN **13466-78-9** REGISTRY  
 CN Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 3-Carene (8CI)  
 OTHER NAMES:  
 CN (.+-.)-.DELTA.3-Carene  
 CN (.+-.)-3-Carene  
 CN .DELTA.3-Carene  
 FS 3D CONCORD  
 DR 116783-27-8  
 MF C10 H16  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3670 REFERENCES IN FILE CA (1907 TO DATE)  
 11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 3675 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292185

REFERENCE 2: 140:286510



REFERENCE 3: 140:275693  
 REFERENCE 4: 140:275691  
 REFERENCE 5: 140:275688  
 REFERENCE 6: 140:269828  
 REFERENCE 7: 140:269690  
 REFERENCE 8: 140:267624  
 REFERENCE 9: 140:267447  
 REFERENCE 10: 140:252619

L23 ANSWER 2 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 6753-98-6 REGISTRY

CN 1,4,8-Cycloundecatriene, 2,6,6,9-tetramethyl-, (1E,4E,8E)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN .alpha.-Humulene (6CI, 7CI)

CN 1,4,8-Cycloundecatriene, 2,6,6,9-tetramethyl-, (E,E,E)- (8CI)

OTHER NAMES:

CN (.+-.)-.alpha.-Humulene

CN .alpha.-Caryophyllene

CN Humulene

FS STEREOSEARCH

DR 19132-75-3, 65907-25-7

MF C15 H24

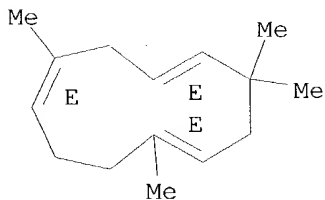
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as described by E or Z.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

4184 REFERENCES IN FILE CA (1907 TO DATE)

12 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

4202 REFERENCES IN FILE CAPLUS (1907 TO DATE)

24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292189

REFERENCE 2: 140:284304  
 REFERENCE 3: 140:284281  
 REFERENCE 4: 140:284272  
 REFERENCE 5: 140:275904  
 REFERENCE 6: 140:275895  
 REFERENCE 7: 140:275890  
 REFERENCE 8: 140:275697  
 REFERENCE 9: 140:275693  
 REFERENCE 10: 140:275692

L23 ANSWER 3 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **6485-40-1** REGISTRY

CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (5R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (R)-

CN p-Mentha-6,8-dien-2-one, (R)-(-)- (8CI)

OTHER NAMES:

CN (-)-(5R)-Carvone

CN (-)-(R)-Carvone

CN (-)-Carvone

CN (-)-p-Mentha-6,8-dien-2-one

CN (4R)-(-)-Carvone

CN (R)-(-)-Carvone

CN (R)-Carvone

CN (R)-Carvone

CN L-(-)-Carvone

CN 1-1-Methyl-4-isopropenyl-6-cyclohexen-2-one

CN 1-Carvone

CN L-Carvone

CN R-(-)-Carvone

FS STEREOSEARCH

MF C10 H14 O

CI COM

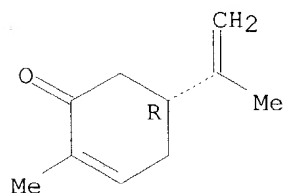
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DETHERM\*, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (-).



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

1039 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1040 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:292244  
 REFERENCE 2: 140:286704  
 REFERENCE 3: 140:275895  
 REFERENCE 4: 140:269690  
 REFERENCE 5: 140:253314  
 REFERENCE 6: 140:217818  
 REFERENCE 7: 140:217067  
 REFERENCE 8: 140:204779  
 REFERENCE 9: 140:199036  
 REFERENCE 10: 140:194874

L23 ANSWER 4 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **6380-28-5** REGISTRY

CN Phenol, 2-methyl-5-(1-methylethyl)-, acetate (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Carvacrol, acetate (8CI)

OTHER NAMES:

CN Carvacryl acetate

CN NSC 6601

FS 3D CONCORD

MF C12 H16 O2

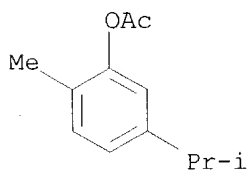
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA,  
 CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, HODOC\*, NAPRALERT,  
 SPECINFO, TOXCENTER, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

108 REFERENCES IN FILE CA (1907 TO DATE)  
 108 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:267447  
 REFERENCE 2: 140:248634

REFERENCE 3: 140:222846  
 REFERENCE 4: 140:187073  
 REFERENCE 5: 139:385835  
 REFERENCE 6: 139:348120  
 REFERENCE 7: 139:234988  
 REFERENCE 8: 139:227261  
 REFERENCE 9: 139:185285  
 REFERENCE 10: 139:114422

L23 ANSWER 5 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 6379-73-3 REGISTRY

CN Benzene, 2-methoxy-1-methyl-4-(1-methylethyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Anisole, 5-isopropyl-2-methyl- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 2-Methoxy-p-cymol

CN 5-Isopropyl-2-methylanisole

CN Carvacrol methyl ether

CN Carvacryl methyl ether

CN Methyl carvacryl ether

CN Methylcarvacrol

CN NSC 406512

CN O-Methylcarvacrol

FS 3D CONCORD

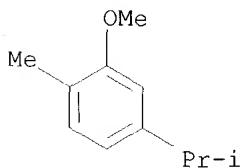
MF C11 H16 O

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, NAPRALERT, TOXCENTER, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

240 REFERENCES IN FILE CA (1907 TO DATE)

240 REFERENCES IN FILE CAPLUS (1907 TO DATE)

8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:275691  
 REFERENCE 2: 140:250116  
 REFERENCE 3: 140:248634  
 REFERENCE 4: 140:222843

REFERENCE 5: 140:187073  
 REFERENCE 6: 140:160454  
 REFERENCE 7: 140:117065  
 REFERENCE 8: 140:92857  
 REFERENCE 9: 140:38322  
 REFERENCE 10: 140:19592

L23 ANSWER 6 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 5948-04-9 REGISTRY

CN Cyclohexanone, 2-methyl-5-(1-methylethenyl)-, (2R,5R)-rel- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanone, 2-methyl-5-(1-methylethenyl)-, trans-

CN p-Menth-8-en-2-one, trans- (8CI)

OTHER NAMES:

CN (.+-.)-Dihydrocarvone

CN Carvone, dihydro-

CN Dihydrocarvone

CN trans-Dihydrocarvone

CN trans-p-Menth-8-en-2-one

FS STEREOSEARCH

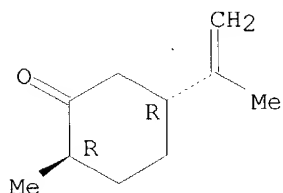
DR 4584-09-2

MF C10 H16 O

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, NAPRALERT, SPECINFO, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)

Relative stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

463 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 463 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:275895  
 REFERENCE 2: 140:269785  
 REFERENCE 3: 140:267447

REFERENCE 4: 140:240581  
 REFERENCE 5: 140:194874  
 REFERENCE 6: 140:133439  
 REFERENCE 7: 140:125332  
 REFERENCE 8: 140:113264  
 REFERENCE 9: 140:90705  
 REFERENCE 10: 140:31450

L23 ANSWER 7 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **5794-03-6** REGISTRY

CN Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene-, (1R,4S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene-, (1R)-

CN Camphene, (1R,4S)-(+)- (8CI)

OTHER NAMES:

CN (+)-Camphene

CN (1R)-Camphene

CN (1R,4S)-2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane

CN d-Camphene

FS STEREOSEARCH

MF C10 H16

CI COM

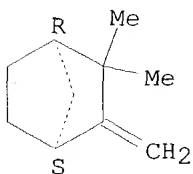
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, NAPRALERT, SPECINFO, TOXCENTER, ULIDAT, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

174 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

174 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:203877

REFERENCE 2: 140:176684

REFERENCE 3: 139:357574

REFERENCE 4: 139:258140  
 REFERENCE 5: 139:85148  
 REFERENCE 6: 139:19561  
 REFERENCE 7: 138:369028  
 REFERENCE 8: 138:354105  
 REFERENCE 9: 138:351095  
 REFERENCE 10: 138:187423

L23 ANSWER 8 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 5392-40-5 REGISTRY

CN 2,6-Octadienal, 3,7-dimethyl- (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN 3,7-Dimethyl-2,6-octadien-1-al

CN 3,7-Dimethyl-2,6-octadienal

CN Citral

CN Lemarome N

CN Lemsyn GB

CN NSC 6170

FS 3D CONCORD

DR 433282-33-8, 8022-94-4, 96680-15-8, 37350-34-8, 250599-19-0

MF C10 H16 O

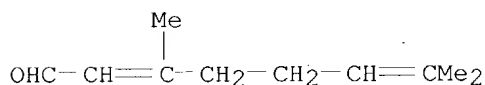
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM\*, DRUGU, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, PS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3324 REFERENCES IN FILE CA (1907 TO DATE)

41 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3327 REFERENCES IN FILE CAPLUS (1907 TO DATE)

7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:293378  
 REFERENCE 2: 140:292244  
 REFERENCE 3: 140:292199  
 REFERENCE 4: 140:287124  
 REFERENCE 5: 140:286540  
 REFERENCE 6: 140:282749

REFERENCE 7: 140:282748

REFERENCE 8: 140:275891

REFERENCE 9: 140:271020

REFERENCE 10: 140:270465

L23 ANSWER 9 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 2244-16-8 REGISTRY

CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (5S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)-, (S)-

CN p-Mentha-6,8-dien-2-one, (S)-(+)- (8CI)

OTHER NAMES:

CN (+)-Carvone

CN (S)-(+)-Carvone

CN (S)-Carvone

CN Carvone, (+)-

CN D-(+)-Carvone

CN d-1-Methyl-4-isopropenyl-6-cyclohexen-2-one

CN d-Carvone

CN D-Carvone

CN Talent

FS STEREOSEARCH

DR 53763-73-8

MF C10 H14 O

CI COM

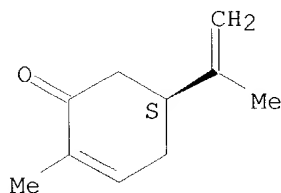
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CABA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DETHERM\*, GMELIN\*, HODOC\*, HSDB\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

672 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

673 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:270465

REFERENCE 2: 140:217819

REFERENCE 3: 140:194874



REFERENCE 4: 140:176684  
 REFERENCE 5: 140:162588  
 REFERENCE 6: 140:146304  
 REFERENCE 7: 140:146298  
 REFERENCE 8: 140:144733  
 REFERENCE 9: 140:138353  
 REFERENCE 10: 140:127361

L23 ANSWER 10 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 1825-21-4 REGISTRY

CN Benzene, pentachloromethoxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Anisole, 2,3,4,5,6-pentachloro- (6CI, 7CI, 8CI)

OTHER NAMES:

CN 2,3,4,5,6-Pentachloroanisole

CN Methyl pentachlorophenate

CN Methyl pentachlorophenyl ether

CN PCP methyl ether

CN Pentachloroanisole

CN Pentachloromethoxybenzene

CN Pentachlorophenol methyl ether

CN Pentachlorophenyl methyl ether

FS 3D CONCORD

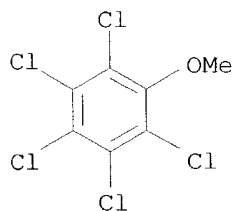
DR 121272-34-2

MF C7 H3 Cl5 O

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, HSDB\*, MEDLINE, MSDS-OHS, NIOSHTIC, PIRA, RTECS\*, SPECINFO, TOXCENTER, ULIDAT, USPATFULL

(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

413 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

413 REFERENCES IN FILE CAPLUS (1907 TO DATE)

13 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292040

REFERENCE 2: 140:265760

REFERENCE 3: 140:252474  
 REFERENCE 4: 140:176649  
 REFERENCE 5: 140:76139  
 REFERENCE 6: 140:64171  
 REFERENCE 7: 139:334073  
 REFERENCE 8: 139:318570  
 REFERENCE 9: 139:218469  
 REFERENCE 10: 139:201929

L23 ANSWER 11 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 1195-79-5 REGISTRY

CN Bicyclo[2.2.1]heptan-2-one, 1,3,3-trimethyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Norbornanone, 1,3,3-trimethyl- (6CI, 8CI)

OTHER NAMES:

CN (+-)-Fenchone

CN 1,3,3-Trimethyl-2-norbornanone

CN 1,3,3-Trimethylbicyclo[2.2.1]heptan-2-one

CN 1,3,3-Trimethylnorcamphor

CN dl-Fenchone

CN Fenchone

CN NSC 122687

CN NSC 8896

FS 3D CONCORD

DR 126-21-6, 18492-37-0

MF C10 H16 O

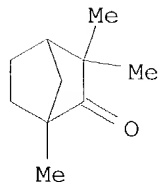
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSChem, DDFU, DETHERM\*, DRUGU, EMBASE, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NAPRALERT, NIOSHTIC, RTECS\*, SPECINFO, TOXCENTER, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1151 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1156 REFERENCES IN FILE CAPLUS (1907 TO DATE)

36 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:216365  
 REFERENCE 2: 140:212437  
 REFERENCE 3: 140:204765  
 REFERENCE 4: 140:204763  
 REFERENCE 5: 140:204762  
 REFERENCE 6: 140:192520  
 REFERENCE 7: 140:180404  
 REFERENCE 8: 140:164045  
 REFERENCE 9: 140:162438  
 REFERENCE 10: 140:142619

L23 ANSWER 12 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **1139-30-6** REGISTRY

CN 5-Oxatricyclo[8.2.0.04,6]dodecane, 4,12,12-trimethyl-9-methylene-,  
 (1R,4R,6R,10S)- (8CI, 9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 5-Oxatricyclo[8.2.0.04,6]dodecane, 4,12,12-trimethyl-9-methylene-,  
 [1R-(1R\*,4R\*,6R\*,10S\*)]-

CN Caryophyllene oxide (6CI)

CN Caryophyllene, epoxide (7CI)

OTHER NAMES:

CN (-)-.beta.-Caryophyllene epoxide

CN (-)-.beta.-Caryophyllene oxide

CN (-)-Caryophyllene oxide

CN (-)-Epoxydihydrocaryophyllene

CN .beta.-Caryophyllene epoxide

CN .beta.-Caryophyllene oxide

CN 4.beta.,5.alpha.-Epoxy-caryophyllene

CN 6,7-Epoxy-3(15)-caryophyllene

CN Caryophyllene 4.beta.,5.alpha.-epoxide

CN Caryophyllene 4.beta.,5.alpha.-oxide

CN trans-Caryophyllene oxide

FS STEREOSEARCH

DR 11023-55-5, 105120-46-5, 32095-03-7, 52209-95-7

MF C15 H24 O

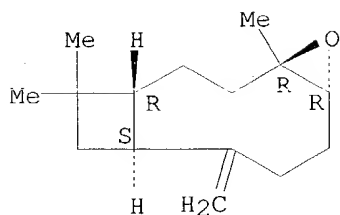
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX,  
 CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, HSDB\*, IPA, NAPRALERT, NIOSHTIC,  
 PIRA, RTECS\*, SPECINFO, TOXCENTER, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

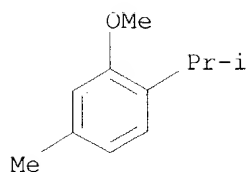


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2720 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2744 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292197  
 REFERENCE 2: 140:292190  
 REFERENCE 3: 140:292187  
 REFERENCE 4: 140:292185  
 REFERENCE 5: 140:284304  
 REFERENCE 6: 140:284272  
 REFERENCE 7: 140:275890  
 REFERENCE 8: 140:275889  
 REFERENCE 9: 140:275697  
 REFERENCE 10: 140:275696

L23 ANSWER 13 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN **1076-56-8** REGISTRY  
 CN Benzene, 2-methoxy-4-methyl-1-(1-methylethyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Anisole, 2-isopropyl-5-methyl- (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN 1-Isopropyl-2-methoxy-4-methylbenzene  
 CN 2-Isopropyl-5-methylanisole  
 CN 3-Methoxy-p-cymene  
 CN 4-Isopropyl-3-methoxytoluene  
 CN Methyl thymol ether  
 CN Methyl thymyl ether  
 CN NSC 404221  
 CN O-Methylthymol  
 CN Thymol methyl ether  
 CN Thymyl methyl ether  
 FS 3D CONCORD  
 MF C11 H16 O  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA,  
 CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, DETHERM\*, NAPRALERT,  
 RTECS\*, SPECINFO, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

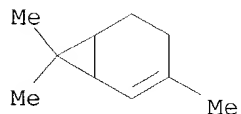


**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

477 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 479 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:275691  
 REFERENCE 2: 140:267447  
 REFERENCE 3: 140:234660  
 REFERENCE 4: 140:204760  
 REFERENCE 5: 140:204759  
 REFERENCE 6: 140:178284  
 REFERENCE 7: 140:117065  
 REFERENCE 8: 140:116916  
 REFERENCE 9: 140:108111  
 REFERENCE 10: 140:104490

L23 ANSWER 14 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 554-61-0 REGISTRY  
 CN Bicyclo[4.1.0]hept-2-ene, 3,7,7-trimethyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 2-Carene (7CI, 8CI)  
 OTHER NAMES:  
 CN (.+-.)-2-Carene  
 CN .DELTA.2-Carene  
 CN .DELTA.4-Carene  
 FS 3D CONCORD  
 DR 53702-19-5  
 MF C10 H16  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA,  
 CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST, CSNB, IFICDB, IFIPAT,  
 IFIUDB, NAPRALERT, SPECINFO, TOXCENTER, ULIDAT, USPATFULL  
 (\*File contains numerically searchable property data)



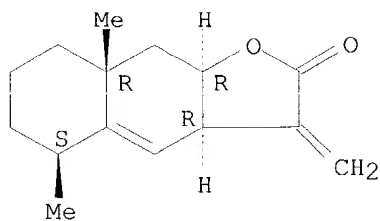
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

374 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 375 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:252619  
 REFERENCE 2: 140:250120  
 REFERENCE 3: 140:222056  
 REFERENCE 4: 140:204759  
 REFERENCE 5: 140:181474  
 REFERENCE 6: 140:180404  
 REFERENCE 7: 140:178380  
 REFERENCE 8: 140:176684  
 REFERENCE 9: 140:169217  
 REFERENCE 10: 140:142100

L23 ANSWER 15 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 546-43-0 REGISTRY  
 CN Naphtho[2,3-b]furan-2(3H)-one, 3a,5,6,7,8,8a,9,9a-octahydro-5,8a-dimethyl-3-methylene-, (3aR,5S,8aR,9aR)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 4.alpha.H-Eudesma-5,11(13)-dien-12-oic acid, 8.beta.-hydroxy-, .gamma.-lactone (8CI)  
 CN Alantolactone (6CI)  
 CN Helenin (7CI)  
 CN Naphtho[2,3-b]furan-2(3H)-one, 3a,5,6,7,8,8a,9,9a-octahydro-5,8a-dimethyl-3-methylene-, [3aR-(3a.alpha.,5.beta.,8a.beta.,9a.alpha.)]-  
 OTHER NAMES:  
 CN (+)-Alantolactone  
 CN Alant camphor  
 CN Elecampane camphor  
 CN Eupatal  
 CN Inula camphor  
 CN NSC 93131  
 FS STEREOSEARCH  
 MF C15 H20 O2  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSChem, DDFU, DETHERM\*, DRUGU, EMBASE, HODOC\*, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, RTECS\*, TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

206 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 206 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:332331  
 REFERENCE 2: 139:239847  
 REFERENCE 3: 139:202444  
 REFERENCE 4: 139:78728  
 REFERENCE 5: 138:265132  
 REFERENCE 6: 138:86548  
 REFERENCE 7: 138:55630  
 REFERENCE 8: 138:2267  
 REFERENCE 9: 136:262668  
 REFERENCE 10: 136:252227

L23 ANSWER 16 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **499-75-2** REGISTRY

CN Phenol, 2-methyl-5-(1-methylethyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Carvacrol (8CI)

OTHER NAMES:

CN 2-Hydroxy-1-methyl-4-(1-methylethyl)benzene

CN 2-Hydroxy-p-cymene

CN 2-Methyl-5-(1-methylethyl)phenol

CN 2-Methyl-5-isopropylphenol

CN 3-Isopropyl-6-methylphenol

CN 5-Isopropyl-2-methylphenol

CN 5-Isopropyl-o-cresol

CN 6-Methyl-3-isopropylphenol

CN Antioxine

CN Isopropyl o-cresol

CN Isothymol

CN NSC 6188

CN p-Cymen-2-ol

FS 3D CONCORD

MF C10 H14 O

CI COM

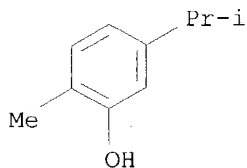
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS,

CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DDFU, DETHERM\*, DIOGENES, DRUGU,  
EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,  
MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO,  
TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2632 REFERENCES IN FILE CA (1907 TO DATE)  
18 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
2640 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
20 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292191  
REFERENCE 2: 140:292187  
REFERENCE 3: 140:275891  
REFERENCE 4: 140:275698  
REFERENCE 5: 140:275690  
REFERENCE 6: 140:267447  
REFERENCE 7: 140:250015  
REFERENCE 8: 140:248634  
REFERENCE 9: 140:240660  
REFERENCE 10: 140:240581

L23 ANSWER 17 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 499-70-7 REGISTRY

CN Cyclohexanone, 2-methyl-5-(1-methylethyl)-, (2R,5R)-rel- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanone, 2-methyl-5-(1-methylethyl)-, trans-

OTHER NAMES:

CN Carvomenthone

CN Tetrahydrocarvone

CN trans-5-Isopropyl-2-methylcyclohexanone

CN trans-p-Menthan-2-one

FS STEREOSEARCH

DR 17712-01-5, 3901-92-6, 80876-46-6, 116562-19-7

MF C10 H18 O

LC STN Files: ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,  
CASREACT, CHEMINFORMRX, CHEMLIST, HODOC\*, NAPRALERT, SPECINFO,  
TOXCENTER, USPATFULL

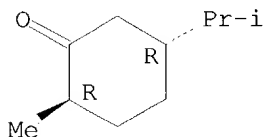
(\*File contains numerically searchable property data)



Other Sources: DSL\*\*, EINECS\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Relative stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

115 REFERENCES IN FILE CA (1907 TO DATE)  
115 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:324947

REFERENCE 2: 137:278746

REFERENCE 3: 137:190040

REFERENCE 4: 137:185681

REFERENCE 5: 136:374498

REFERENCE 6: 135:231535

REFERENCE 7: 135:141945

REFERENCE 8: 135:107463

REFERENCE 9: 134:63162

REFERENCE 10: 133:362435

L23 ANSWER 18 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **470-82-6** REGISTRY

CN 2-Oxabicyclo[2.2.2]octane, 1,3,3-trimethyl- (6CI, 9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN p-Menthane, 1,8-epoxy- (8CI)

OTHER NAMES:

CN 1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane

CN 1,8-Cineol

CN 1,8-Cineole

CN 1,8-Epoxy-p-menthane

CN 2-Oxa-1,3,3-trimethylbicyclo[2.2.2]octane

CN Cajeputol

CN Cineol

CN Cineole

CN Eucalyptol

CN Eucalyptole

CN Eucapur

CN NSC 6171

CN p-Cineole

CN Terpan

FS 3D CONCORD

DR 8024-52-0, 8024-53-1, 10458-11-4

MF C10 H18 O

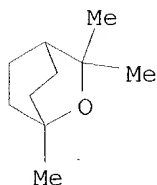
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PDLCOM\*, PROMT, PS, RTECS\*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

7064 REFERENCES IN FILE CA (1907 TO DATE)

38 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

7088 REFERENCES IN FILE CAPLUS (1907 TO DATE)

8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292732

REFERENCE 2: 140:292641

REFERENCE 3: 140:292196

REFERENCE 4: 140:292195

REFERENCE 5: 140:292194

REFERENCE 6: 140:292190

REFERENCE 7: 140:292186

REFERENCE 8: 140:291272

REFERENCE 9: 140:286209

REFERENCE 10: 140:282772

L23 ANSWER 19 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 141-92-4 REGISTRY

CN 2-Octanol, 8,8-dimethoxy-2,6-dimethyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Octanal, 7-hydroxy-3,7-dimethyl-, dimethyl acetal (6CI, 7CI, 8CI)

OTHER NAMES:

CN 1,1-Dimethoxy-3,7-dimethyloctan-7-ol

CN 7-Hydroxy-3,7-dimethyloctanal, dimethyl acetal

CN 8,8-Dimethoxy-2,6-dimethyl-2-octanol

CN Hydroxycitronellal dimethyl acetal

CN Laurine dimethyl acetal

CN NSC 76412

FS 3D CONCORD

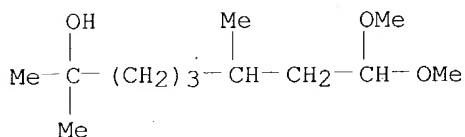
MF C12 H26 O3

LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
CHEMLIST, CIN, CSChem, IFICDB, IFIPAT, IFIUDb, RTECS\*, SPECINFO,  
TOXCENTER, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

26 REFERENCES IN FILE CA (1907 TO DATE)

26 REFERENCES IN FILE CAPLUS (1907 TO DATE)

4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 138:326295

REFERENCE 2: 138:242863

REFERENCE 3: 137:357932

REFERENCE 4: 136:147821

REFERENCE 5: 133:250376

REFERENCE 6: 131:156180

REFERENCE 7: 130:342748

REFERENCE 8: 130:172746

REFERENCE 9: 127:225086

REFERENCE 10: 127:23502

L23 ANSWER 20 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN **141-27-5** REGISTRY

CN 2,6-Octadienal, 3,7-dimethyl-, (2E)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,6-Octadienal, 3,7-dimethyl-, (E)- (8CI)

OTHER NAMES:

CN (2E)-3,7-Dimethyl-2,6-octadien-1-al

CN (2E)-3,7-Dimethyl-2,6-octadienal

CN (E)-3,7-Dimethyl-2,6-octadienal

CN (E)-Citral

CN (E)-Geranial

CN (E)-Neral

CN .alpha.-Citral

CN .beta.-Geranial

CN Citral a

CN Geranaldehyde

CN Geranial

CN trans-3,7-Dimethyl-2,6-octadienal

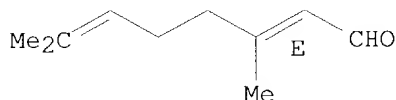
CN trans-Citral

FS STEREOSEARCH

MF C10 H16 O

CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CEN, CHEMINFORMRX,  
 CHEMLIST, CIN, DETHERM\*, EMBASE, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA,  
 MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO,  
 TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



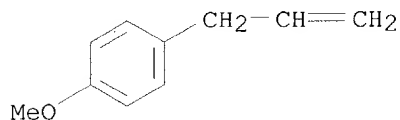
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2304 REFERENCES IN FILE CA (1907 TO DATE)  
 8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2314 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292185  
 REFERENCE 2: 140:286510  
 REFERENCE 3: 140:275895  
 REFERENCE 4: 140:275698  
 REFERENCE 5: 140:275695  
 REFERENCE 6: 140:275686  
 REFERENCE 7: 140:271017  
 REFERENCE 8: 140:253112  
 REFERENCE 9: 140:249085  
 REFERENCE 10: 140:234709

L23 ANSWER 21 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 140-67-0 REGISTRY  
 CN Benzene, 1-methoxy-4-(2-propenyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Anisole, p-allyl- (8CI)  
 CN Estragole (6CI)  
 CN Ether, p-allylphenyl methyl (7CI)  
 OTHER NAMES:  
 CN 1-Allyl-4-methoxybenzene  
 CN 1-Methoxy-4-(2-propenyl)benzene  
 CN 3-(4-Methoxyphenyl)-1-propene  
 CN 3-(p-Methoxyphenyl)-1-propene  
 CN 3-(p-Methoxyphenyl)propene  
 CN 4-Allylanisole  
 CN 4-Allylmethoxybenzene  
 CN 4-Methoxyallylbenzene  
 CN Chavicol methyl ether

CN Chavicol, methyl-  
 CN Chavicol, O-methyl-  
 CN Esdragol  
 CN Esdragole  
 CN Esdragon  
 CN Estragol  
 CN Isoanethole  
 CN Methyl chavicol  
 CN NSC 404113  
 CN p-Allylanisole  
 CN p-Allylphenyl methyl ether  
 CN p-Methoxyallylbenzene  
 FS 3D CONCORD  
 DR 1407-27-8, 77525-18-9  
 MF C10 H12 O  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DRUGU,  
 EMBASE, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*,  
 NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*, SPECINFO, SYNTHLINE,  
 TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



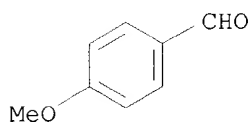
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1598 REFERENCES IN FILE CA (1907 TO DATE)  
 11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1603 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 33 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292364  
 REFERENCE 2: 140:292199  
 REFERENCE 3: 140:284281  
 REFERENCE 4: 140:282602  
 REFERENCE 5: 140:270549  
 REFERENCE 6: 140:265938  
 REFERENCE 7: 140:256023  
 REFERENCE 8: 140:253293  
 REFERENCE 9: 140:250015  
 REFERENCE 10: 140:249085

L23 ANSWER 22 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 123-11-5 REGISTRY

CN Benzaldehyde, 4-methoxy- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN p-Anisaldehyde (8CI)  
 OTHER NAMES:  
 CN 4-Anisaldehyde  
 CN 4-Methoxybenzaldehyde  
 CN Anisaldehyde  
 CN Anisic aldehyde  
 CN Aubepine  
 CN Crategine  
 CN NSC 5590  
 CN Obepin  
 CN p-Anisic aldehyde  
 CN p-Formylanisole  
 CN p-Methoxybenzaldehyde  
 FS 3D CONCORD  
 DR 68894-36-0, 26249-15-0  
 MF C8 H8 O2  
 CI COM  
 LC STN Files: ANABSTR, BEILSTEIN\*, CA, CAPLUS, CHEMCATS, CHEMLIST, HODOC\*,  
 IFICDB, IFIPAT, IFIUDB, IPA, NIOSHTIC, SPECINFO, SYNTHLINE, TOXCENTER,  
 USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



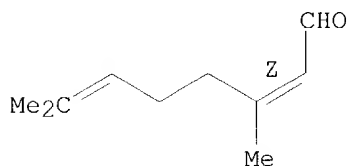
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

14137 REFERENCES IN FILE CA (1907 TO DATE)  
 50 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 14193 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:288811  
 REFERENCE 2: 140:287320  
 REFERENCE 3: 140:287318  
 REFERENCE 4: 140:287312  
 REFERENCE 5: 140:287213  
 REFERENCE 6: 140:287178  
 REFERENCE 7: 140:287156  
 REFERENCE 8: 140:287127  
 REFERENCE 9: 140:286857  
 REFERENCE 10: 140:286856

L23 ANSWER 23 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 106-26-3 REGISTRY  
 CN 2,6-Octadienal, 3,7-dimethyl-, (2Z)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 2,6-Octadienal, 3,7-dimethyl-, (Z)- (8CI)  
 OTHER NAMES:  
 CN (2Z)-3,7-Dimethyl-2,6-octadien-1-al  
 CN (2Z)-3,7-Dimethyl-2,6-octadienal  
 CN (Z)-3,7-Dimethyl-2,6-octadienal  
 CN (Z)-Citral  
 CN (Z)-Neral  
 CN .beta.-Citral  
 CN cis-3,7-Dimethyl-2,6-octadienal  
 CN cis-Citral  
 CN Citral b  
 CN Neral  
 FS STEREOSEARCH  
 MF C10 H16 O  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMINFORMRX, CHEMLIST,  
 DETHERM\*, EMBASE, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK\*, MSDS-OHS,  
 NAPRALERT, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1916 REFERENCES IN FILE CA (1907 TO DATE)  
 8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1923 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:286510  
 REFERENCE 2: 140:275895  
 REFERENCE 3: 140:275695  
 REFERENCE 4: 140:269690  
 REFERENCE 5: 140:249085  
 REFERENCE 6: 140:234709  
 REFERENCE 7: 140:234684  
 REFERENCE 8: 140:234661

REFERENCE 9: 140:234660

REFERENCE 10: 140:234611

L23 ANSWER 24 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 106-23-0 REGISTRY

CN 6-Octenal, 3,7-dimethyl- (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN (.+-.)-Citronellal

CN .beta.-Citronellal

CN 2,3-Dihydrocitral

CN 3,7-Dimethyl-6-octenal

CN 3,7-Dimethyloct-6-en-1-al

CN Citronellal

CN dl-Citronellal

CN NSC 46106

CN Rhodinal

FS 3D CONCORD

DR 26489-02-1

MF C10 H18 O

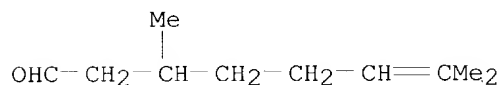
CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DETHERM\*, DRUGU, EMBASE, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2682 REFERENCES IN FILE CA (1907 TO DATE)

22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2692 REFERENCES IN FILE CAPLUS (1907 TO DATE)

14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292643

REFERENCE 2: 140:292241

REFERENCE 3: 140:275904

REFERENCE 4: 140:275695

REFERENCE 5: 140:269690

REFERENCE 6: 140:240582

REFERENCE 7: 140:237571

REFERENCE 8: 140:235877

REFERENCE 9: 140:234684



REFERENCE 10: 140:234611

L23 ANSWER 25 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 104-55-2 REGISTRY  
 CN 2-Propenal, 3-phenyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Cinnamaldehyde (8CI)  
 OTHER NAMES:  
 CN .beta.-Phenylacrolein  
 CN 3-Phenyl-2-propen-1-al  
 CN 3-Phenyl-2-propenal  
 CN 3-Phenyl-2-propenaldehyde  
 CN 3-Phenyl-2-propene-1-al  
 CN 3-Phenylacrolein  
 CN 3-Phenylacrylaldehyde  
 CN 3-Phenylpropenal  
 CN Abion CA  
 CN Benzylideneacetaldehyde  
 CN Cassia aldehyde  
 CN Cinnamal  
 CN Cinnamic aldehyde  
 CN Cinnamite  
 CN Cinnamyl aldehyde  
 CN NSC 16935  
 CN NSC 40346  
 CN Phenylacrolein  
 CN Zimtaldehyde  
 FS 3D CONCORD  
 MF C9 H8 O  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM\*, GMELIN\*, IFICDB, IFIPAT, IFIUIDB, MEDLINE, MSDS-OHS, NAPRALERT, PROMT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)

Ph-CH=CH-CHO

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

7359 REFERENCES IN FILE CA (1907 TO DATE)  
 91 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 7381 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292199

REFERENCE 2: 140:287828

REFERENCE 3: 140:287094

REFERENCE 4: 140:286851

REFERENCE 5: 140:286849

REFERENCE 6: 140:286330

REFERENCE 7: 140:282603

REFERENCE 8: 140:282602

REFERENCE 9: 140:280184

REFERENCE 10: 140:270359

L23 ANSWER 26 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 104-53-0 REGISTRY

CN Benzenepropanal (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Hydrocinnamaldehyde (6CI, 8CI)

OTHER NAMES:

CN .beta.-Phenylpropionaldehyde

CN 3-Phenyl-1-propanal

CN 3-Phenylpropanal

CN 3-Phenylpropanaldehyde

CN 3-Phenylpropionaldehyde

CN 3-Phenylpropyl aldehyde

CN Benzylacetaldehyde

CN Dihydrocinnamaldehyde

CN Hydrocinnamic aldehyde

CN NSC 9271

FS 3D CONCORD

MF C9 H10 O

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DETHERM\*, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, NAPRALERT, PROMT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Ph-CH<sub>2</sub>-CH<sub>2</sub>-CHO

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3550 REFERENCES IN FILE CA (1907 TO DATE)

19 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3560 REFERENCES IN FILE CAPLUS (1907 TO DATE)

24 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:287710

REFERENCE 2: 140:287281

REFERENCE 3: 140:287094

REFERENCE 4: 140:287091

REFERENCE 5: 140:286857

REFERENCE 6: 140:286851

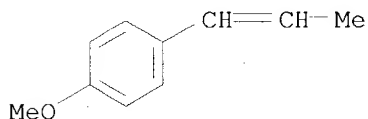
REFERENCE 7: 140:270542

REFERENCE 8: 140:253561

REFERENCE 9: 140:253422

REFERENCE 10: 140:253401

L23 ANSWER 27 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 104-46-1 REGISTRY  
 CN Benzene, 1-methoxy-4-(1-propenyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Anisole, p-propenyl- (8CI)  
 OTHER NAMES:  
 CN 1-Methoxy-4-(1-propenyl)benzene  
 CN 1-Methoxy-4-propenylbenzene  
 CN 1-Propene, 1-(4-methoxyphenyl)-  
 CN 4-(1-Propenyl)anisole  
 CN 4-Methoxy-1-propenylbenzene  
 CN 4-Methoxypropenylbenzene  
 CN 4-Propenylanisole  
 CN Anethol  
 CN Anethole  
 CN Anise camphor  
 CN Isoestrangle  
 CN Nauli gum  
 CN NSC 4018  
 CN Oil of aniseed  
 CN p-1-Propenylanisole  
 CN p-Anethole  
 CN p-Methoxy-.beta.-methylstyrene  
 CN p-Propenylanisole  
 CN p-Propenylphenyl methyl ether  
 FS 3D CONCORD  
 DR 12002-40-3, 8022-08-0  
 MF C10 H12 O  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*,  
 DIOGENES, DIPPR\*, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT,  
 IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*,  
 PROMT, PS, RTECS\*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1620 REFERENCES IN FILE CA (1907 TO DATE)  
 13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1621 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282787

REFERENCE 2: 140:266145

REFERENCE 3: 140:265890

REFERENCE 4: 140:263933  
 REFERENCE 5: 140:241137  
 REFERENCE 6: 140:240660  
 REFERENCE 7: 140:237571  
 REFERENCE 8: 140:222931  
 REFERENCE 9: 140:210720  
 REFERENCE 10: 140:194580

L23 ANSWER 28 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 103-95-7 REGISTRY

CN Benzenepropanal, .alpha.-methyl-4-(1-methylethyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Hydrocinnamaldehyde, p-isopropyl-.alpha.-methyl- (6CI, 7CI, 8CI)

OTHER NAMES:

CN .alpha.-Methyl-p-isopropylhydrocinnamaldehyde

CN 2-Methyl-3-(p-isopropylphenyl)propionaldehyde

CN 3-(4-Isopropylphenyl)-2-methylpropanal

CN 3-(p-Isopropylphenyl)-2-methylpropionaldehyde

CN 3-p-Cumenyl-2-methylpropionaldehyde

CN 4-Isopropyl-.alpha.-methylhydrocinnamic aldehyde

CN Cyclamal

CN Cyclamen aldehyde

CN Cymal

CN p-Isopropyl-.alpha.-methylhydrocinnamaldehyde

FS 3D CONCORD

DR 80949-77-5

MF C13 H18 O

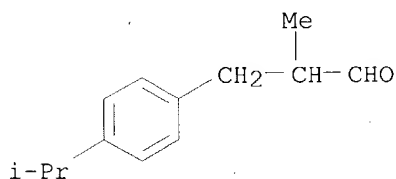
CI COM

LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSChem, CSNB, DDFU, DETHERM\*, DRUGU, EMBASE, HODOC\*, IFICDB, IFIPAT, IFIUDB, PROMT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

300 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

300 REFERENCES IN FILE CAPLUS (1907 TO DATE)

34 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282602  
 REFERENCE 2: 140:240660  
 REFERENCE 3: 140:222931  
 REFERENCE 4: 140:222864  
 REFERENCE 5: 140:204779  
 REFERENCE 6: 140:133439  
 REFERENCE 7: 140:111370  
 REFERENCE 8: 140:77362  
 REFERENCE 9: 140:72209  
 REFERENCE 10: 140:8495

L23 ANSWER 29 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 101-39-3 REGISTRY

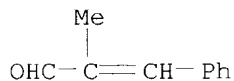
CN 2-Propenal, 2-methyl-3-phenyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:

CN Cinnamaldehyde, .alpha.-methyl- (6CI, 7CI, 8CI)

OTHER NAMES:

CN .alpha.-Methylcinnamaldehyde  
 CN .alpha.-Methylcinnamic aldehyde  
 CN 2-Methyl-3-phenyl-2-propenal  
 CN 2-Methyl-3-phenylacrolein  
 CN 2-Methyl-3-phenylacrylaldehyde  
 CN NSC 22283  
 CN NSC 49286  
 FS 3D CONCORD  
 MF C10 H10 O  
 CI COM

LC STN Files: AGRICOLA, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,  
 CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, DETHERM\*,  
 GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, NAPRALERT, RTECS\*, SPECINFO,  
 SYNTHLINE, TOXCENTER, ULIDAT, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

305 REFERENCES IN FILE CA (1907 TO DATE)  
 305 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282603  
 REFERENCE 2: 140:282602  
 REFERENCE 3: 140:253477

REFERENCE 4: 140:163515  
 REFERENCE 5: 140:133439  
 REFERENCE 6: 140:110830  
 REFERENCE 7: 140:93483  
 REFERENCE 8: 140:93461  
 REFERENCE 9: 140:72209  
 REFERENCE 10: 140:59655

L23 ANSWER 30 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 100-06-1 REGISTRY

CN Ethanone, 1-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acetophenone, 4'-methoxy- (8CI)

OTHER NAMES:

CN 1-(4-Methoxyphenyl)ethanone

CN 1-Acetyl-4-methoxybenzene

CN 4'-Methoxyacetophenone

CN 4-Acetylanisole

CN 4-Methoxyphenyl methyl ketone

CN Acetoanisole

CN Linarodin

CN Methyl 4-methoxyphenyl ketone

CN Methyl p-methoxyphenyl ketone

CN Novatone

CN NSC 209523

CN NSC 5601

CN p-Acetylanisole

CN p-Anisyl methyl ketone

CN p-Methoxy(acetyl)benzene

CN p-Methoxyacetophenone

CN p-Methoxyphenyl methyl ketone

CN para-Methoxyacetophenone

CN Vananote

FS 3D CONCORD

MF C9 H10 O2

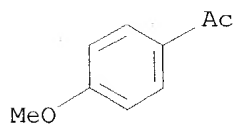
CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, DETHERM\*, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



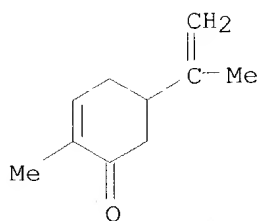
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3208 REFERENCES IN FILE CA (1907 TO DATE)

20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 3222 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:288041  
 REFERENCE 2: 140:286857  
 REFERENCE 3: 140:282602  
 REFERENCE 4: 140:275891  
 REFERENCE 5: 140:271562  
 REFERENCE 6: 140:270910  
 REFERENCE 7: 140:270683  
 REFERENCE 8: 140:253559  
 REFERENCE 9: 140:253506  
 REFERENCE 10: 140:253304

L23 ANSWER 31 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 99-49-0 REGISTRY  
 CN 2-Cyclohexen-1-one, 2-methyl-5-(1-methylethenyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN p-Mentha-6,8-dien-2-one (8CI)  
 OTHER NAMES:  
 CN (.+-.)-Carvone  
 CN 2-Methyl-5-(1-methylethenyl)-2-cyclohexen-1-one  
 CN 2-Methyl-5-isopropenyl-2-cyclohexenone  
 CN 5-Isopropyl-2-methyl-2-cyclohexen-1-one  
 CN Carvone  
 CN DL-Carvone  
 CN Karvon  
 CN NSC 6275  
 CN p-Mentha-1(6),8-dien-2-one  
 FS 3D CONCORD  
 DR 22327-39-5  
 MF C10 H14 O  
 CI COM  
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*,  
 DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA,  
 MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PROMT, RTECS\*, SPECINFO, TOXCENTER,  
 USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2873 REFERENCES IN FILE CA (1907 TO DATE)  
 15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 2885 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292187  
 REFERENCE 2: 140:275895  
 REFERENCE 3: 140:275891  
 REFERENCE 4: 140:275699  
 REFERENCE 5: 140:275698  
 REFERENCE 6: 140:275694  
 REFERENCE 7: 140:275690  
 REFERENCE 8: 140:269853  
 REFERENCE 9: 140:269828  
 REFERENCE 10: 140:269785

L23 ANSWER 32 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 97-53-0 REGISTRY

CN Phenol, 2-methoxy-4-(2-propenyl)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Phenol, 4-allyl-2-methoxy- (8CI)

OTHER NAMES:

CN 1-Allyl-4-hydroxy-3-methoxybenzene

CN 2-Hydroxy-5-allylanisole

CN 2-Methoxy-1-hydroxy-4-allylbenzene

CN 2-Methoxy-4-(2'-propenyl)phenol

CN 2-Methoxy-4-(2-propenyl)phenol

CN 2-Methoxy-4-allylphenol

CN 3-(3-Methoxy-4-hydroxyphenyl)propene

CN 3-(4-Hydroxy-3-methoxyphenyl)-1-propene

CN 4-Allyl-1-hydroxy-2-methoxybenzene

CN 4-Allyl-2-methoxyphenol

CN 4-Allylguaiacol

CN 4-Hydroxy-3-methoxyallylbenzene

CN Allylguaiacol

CN Caryophyllilic acid

CN Eugenol

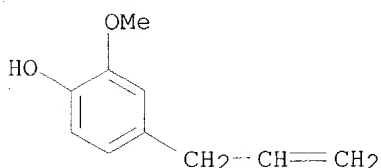
CN Eugenol

CN NSC 209525

CN NSC 8895



CN p-Allylguaiacol  
 CN p-Eugenol  
 FS 3D CONCORD  
 MF C10 H12 O2  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU,  
 DETHERM\*, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB,  
 IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC,  
 PDLCOM\*, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2,  
 USPATFULL, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



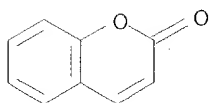
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5904 REFERENCES IN FILE CA (1907 TO DATE)  
 145 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5920 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:296534  
 REFERENCE 2: 140:292241  
 REFERENCE 3: 140:292199  
 REFERENCE 4: 140:286336  
 REFERENCE 5: 140:284037  
 REFERENCE 6: 140:282602  
 REFERENCE 7: 140:275897  
 REFERENCE 8: 140:275779  
 REFERENCE 9: 140:275696  
 REFERENCE 10: 140:275689

L23 ANSWER 33 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 91-64-5 REGISTRY  
 CN 2H-1-Benzopyran-2-one (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Coumarin (8CI)  
 OTHER NAMES:  
 CN 1,2-Benzopyrone  
 CN 2-Propenoic acid, 3-(2-hydroxyphenyl)-, .delta.-lactone  
 CN 5,6-Benzo-2-pyrone  
 CN Benzo-.alpha.-pyrone

CN cis-o-Coumarinic acid lactone  
 CN Coumarinic anhydride  
 CN NSC 8774  
 CN o-Hydroxycinnamic acid lactone  
 CN Rattex  
 CN Tonka bean camphor  
 FS 3D CONCORD  
 MF C9 H6 O2  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DDFU,  
 DETHERM\*, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB,  
 IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC,  
 PDLCOM\*, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2,  
 USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



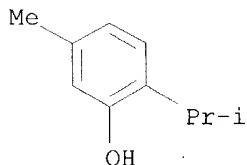
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

7012 REFERENCES IN FILE CA (1907 TO DATE)  
 1514 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 7023 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292499  
 REFERENCE 2: 140:292222  
 REFERENCE 3: 140:292199  
 REFERENCE 4: 140:289230  
 REFERENCE 5: 140:289120  
 REFERENCE 6: 140:287238  
 REFERENCE 7: 140:284269  
 REFERENCE 8: 140:282610  
 REFERENCE 9: 140:280741  
 REFERENCE 10: 140:275891

L23 ANSWER 34 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 89-83-8 REGISTRY  
 CN Phenol, 5-methyl-2-(1-methylethyl)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Thymol (8CI)  
 OTHER NAMES:

CN 1-Methyl-3-hydroxy-4-isopropylbenzene  
 CN 2-Hydroxy-1-isopropyl-4-methylbenzene  
 CN 2-Isopropyl-5-methylphenol  
 CN 3-Hydroxy-p-cymene  
 CN 3-Methyl-6-isopropylphenol  
 CN 5-Methyl-2-(1-methylethyl)phenol  
 CN 5-Methyl-2-isopropyl-1-phenol  
 CN 5-Methyl-2-isopropylphenol  
 CN 6-Isopropyl-3-methylphenol  
 CN 6-Isopropyl-m-cresol  
 CN m-Thymol  
 CN NSC 11215  
 CN NSC 47821  
 CN NSC 49142  
 CN p-Cymen-3-ol  
 CN Thyme camphor  
 CN Thymol Chrystals  
 FS 3D CONCORD  
 MF C10 H14 O  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM\*, DIOGENES,  
 DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA,  
 MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM\*, PIRA, PROMT, PS,  
 RTECS\*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5556 REFERENCES IN FILE CA (1907 TO DATE)  
 60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5565 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292732  
 REFERENCE 2: 140:292650  
 REFERENCE 3: 140:292241  
 REFERENCE 4: 140:292191  
 REFERENCE 5: 140:284281  
 REFERENCE 6: 140:281061  
 REFERENCE 7: 140:275897  
 REFERENCE 8: 140:275690

REFERENCE 9: 140:275688

REFERENCE 10: 140:269701

L23 ANSWER 35 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 89-78-1 REGISTRY

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1R,2S,5R)-rel- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanol, 5-methyl-2-(1-methylethyl)-, (1.alpha.,2.beta.,5.alpha.)-

CN Menthol, cis-1,3,trans-1,4- (8CI)

OTHER NAMES:

CN (.+-.)-Menthol

CN (1R,2S,5R)-rel-5-Methyl-2-(1-methylethyl)cyclohexanol

CN dl-Menthol

CN Fisherman's Friend Lozenges

CN Hexahydrothymol

CN Menthacamphor

CN Menthol

CN Menthomenthol

CN NSC 2603

CN Peppermint camphor

CN rac-Menthol

CN Racementhol

CN Therapeutic Mineral Ice

CN Thymomenthol

FS STEREOSEARCH

DR 15356-70-4

MF C10 H20 O

CI COM

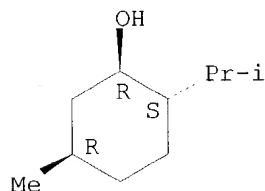
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DIOGENES, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK\*, MSDS-OHS, NIOSHTIC, PDLCOM\*, PIRA, PROMT, PS, RTECS\*, SPECINFO, TOXCENTER, USAN, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Relative stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2450 REFERENCES IN FILE CA (1907 TO DATE)

37 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2456 REFERENCES IN FILE CAPLUS (1907 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292744

REFERENCE 2: 140:292650

REFERENCE 3: 140:292208  
 REFERENCE 4: 140:292186  
 REFERENCE 5: 140:286255  
 REFERENCE 6: 140:276282  
 REFERENCE 7: 140:276205  
 REFERENCE 8: 140:276158  
 REFERENCE 9: 140:270573  
 REFERENCE 10: 140:259084

L23 ANSWER 36 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 87-44-5 REGISTRY

CN Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-, (1R,4E,9S)-  
 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-,  
 (E)-(1R,9S)-(-)- (8CI)

CN Bicyclo[7.2.0]undec-4-ene, 4,11,11-trimethyl-8-methylene-,  
 [1R-(1R\*,4E,9S\*)]-

OTHER NAMES:

CN (-)-(E)-Caryophyllene

CN (-)-.beta.-Caryophyllene

CN (-)-Caryophyllene

CN (-)-E-Caryophyllene

CN (-)-trans-Caryophyllene

CN (E)-Caryophyllene

CN .beta.-Caryophyllen

CN .beta.-Caryophyllene

CN .beta.-Caryophyllene, (-)

CN Caryophyllene

CN 1-Caryophyllene

CN NSC 11906

CN trans-Caryophyllene

FS STEREOSEARCH

DR 8007-38-3, 1407-53-0

MF C15 H24

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX,  
 CHEMLIST, CSCHM, DDFU, DETHERM\*, DRUGU, EMBASE, HODOC\*, IFICDB, IFIPAT,  
 IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*,  
 SPECINFO, TOXCENTER, USPAT2, USPATFULL

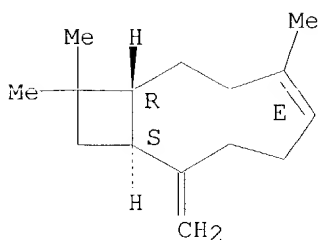
(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

7175 REFERENCES IN FILE CA (1907 TO DATE)  
 31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 7208 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292194  
 REFERENCE 2: 140:292191  
 REFERENCE 3: 140:292190  
 REFERENCE 4: 140:292189  
 REFERENCE 5: 140:292186  
 REFERENCE 6: 140:292185  
 REFERENCE 7: 140:284362  
 REFERENCE 8: 140:284304  
 REFERENCE 9: 140:284282  
 REFERENCE 10: 140:284281

L23 ANSWER 37 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 79-92-5 REGISTRY

CN Bicyclo[2.2.1]heptane, 2,2-dimethyl-3-methylene- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Camphene (8CI)

OTHER NAMES:

CN (.+-.)-Camphene

CN 2,2-Dimethyl-3-methylenebicyclo[2.2.1]heptane

CN 2,2-Dimethyl-3-methylenenorbornane

CN 3,3-Dimethyl-2-methylenenorbornane

CN 3,3-Dimethyl-2-methylenenorcamphane

CN dl-Camphene

CN DL-Camphene

CN NSC 4165

FS 3D CONCORD

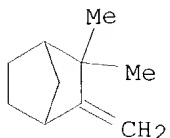
DR 565-00-4

MF C10 H16

CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DDFU, DETHERM\*, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT,

NIOSHTIC, PDLCOM\*, PIRA, PROMT, PS, RTECS\*, SPECINFO, TOXCENTER, ULIDAT,  
 USPAT2, USPATFULL, VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



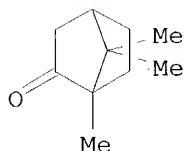
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

7136 REFERENCES IN FILE CA (1907 TO DATE)  
 71 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 7157 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292194  
 REFERENCE 2: 140:292186  
 REFERENCE 3: 140:288630  
 REFERENCE 4: 140:275904  
 REFERENCE 5: 140:275895  
 REFERENCE 6: 140:275891  
 REFERENCE 7: 140:275699  
 REFERENCE 8: 140:275698  
 REFERENCE 9: 140:275694  
 REFERENCE 10: 140:275693

L23 ANSWER 38 OF 39 REGISTRY. COPYRIGHT 2004 ACS on STN  
 RN 76-22-2 REGISTRY  
 CN Bicyclo[2.2.1]heptan-2-one, 1,7,7-trimethyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Camphor (8CI)  
 OTHER NAMES:  
 CN (.+-.)-Camphor  
 CN 1,7,7-Trimethylbicyclo[2.2.1]-2-heptanone  
 CN 1,7,7-Trimethylnorcamphor  
 CN 2-Bornanone  
 CN 2-Camphanone  
 CN Alphanon  
 CN Borneo camphor  
 CN DL-Camphor  
 CN dl-Camphor  
 CN Root bark oil  
 CN Spirit of camphor  
 FS 3D CONCORD  
 DR 8013-55-6, 8022-77-3, 21368-68-3, 48113-22-0

MF C10 H16 O  
 CI COM  
 LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
 BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,  
 CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN,  
 CSCHEM, DETHERM\*, DIOGENES, DIPPR\*, EMBASE, GMELIN\*, HODOC\*, HSDB\*,  
 IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT,  
 NIOSHTIC, PDLCOM\*, PHAR, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER,  
 TULSA, ULIDAT, USAN, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

8964 REFERENCES IN FILE CA (1907 TO DATE)  
 194 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 8987 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:292763  
 REFERENCE 2: 140:292744  
 REFERENCE 3: 140:292650  
 REFERENCE 4: 140:292222  
 REFERENCE 5: 140:292194  
 REFERENCE 6: 140:292186  
 REFERENCE 7: 140:286856  
 REFERENCE 8: 140:286851  
 REFERENCE 9: 140:283320  
 REFERENCE 10: 140:282761

L23 ANSWER 39 OF 39 REGISTRY COPYRIGHT 2004 ACS on STN

RN 72-43-5 REGISTRY

CN Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

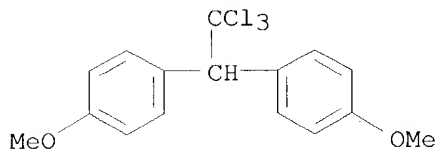
CN Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)- (8CI)

OTHER NAMES:

CN 1,1,1-Trichloro-2,2-bis(4-methoxyphenyl)ethane  
 CN 1,1,1-Trichloro-2,2-bis(p-methoxyphenyl)ethane  
 CN 1,1,1-Trichloro-2,2-di(4-methoxyphenyl)ethane  
 CN 1,1-Bis(p-methoxyphenyl)-2,2,2-trichloroethane  
 CN 2,2,2-Trichloro-1,1-bis(4-methoxyphenyl)ethane  
 CN 2,2-Bis(4-methoxyphenyl)-1,1,1-trichloroethane



CN 2,2-Bis(p-methoxyphenyl)-1,1,1-trichloroethane  
 CN 2,2-Di-p-anisyl-1,1,1-trichloroethane  
 CN 4,4'-(2,2,2-Trichloroethylidene)dianisole  
 CN Di(p-methoxyphenyl)(trichloromethyl)methane  
 CN Dimethoxy-DDT  
 CN DMDT  
 CN Marlate  
 CN Mesox K  
 CN Methoxcide  
 CN Methoxy-DDT  
 CN Methoxychlor  
 CN Metox  
 CN Metox plynny  
 CN Mezox K  
 CN NSC 8945  
 CN p,p'-Dimethoxydiphenyltrichloroethane  
 CN p,p'-DMDT  
 CN p,p'-Methoxychlor  
 FS 3D CONCORD  
 MF C16 H15 Cl3 O2  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CHEMLIST, CHEMSAFE, CIN, CSCHM, CSNB, DETHERM\*, EMBASE,  
 HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK\*, MSDS-OHS,  
 NIOSHTIC, PDLCOM\*, PIRA, PROMT, RTECS\*, SPECINFO, TOXCENTER, ULIDAT,  
 USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3179 REFERENCES IN FILE CA (1907 TO DATE)  
 17 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 3181 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 28 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:282635  
 REFERENCE 2: 140:282634  
 REFERENCE 3: 140:282590  
 REFERENCE 4: 140:282562  
 REFERENCE 5: 140:280742  
 REFERENCE 6: 140:265890  
 REFERENCE 7: 140:240432  
 REFERENCE 8: 140:230692

Pryor 09\_807254

REFERENCE 9: 140:222663

REFERENCE 10: 140:216341

=> fil hcaplus  
 FILE 'HCAPLUS' ENTERED AT 11:26:30 ON 23 APR 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 23 Apr 2004 VOL 140 ISS 18  
 FILE LAST UPDATED: 22 Apr 2004 (20040422/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>  
 =>

=> d stat que  
 L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
 L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
 L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
 L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
 L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFER A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
 L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16  
 L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
 L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19  
 L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18  
 L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998  
 L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR LAURUS OR MOBILIS  
 L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL  
 L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

=>  
=>

=> d ibib abs hitrn 127 1-34

L27 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:769628 HCAPLUS  
DOCUMENT NUMBER: 140:212437  
TITLE: Chemical composition and antifungal activity of  
**essential oils** of seven Moroccan  
**Labiatae** against Botrytis cinerea Pers: Fr.  
AUTHOR(S): Bouchra, Chebli; Achouri, Mohamed; Idrissi Hassani, L.  
M.; Hmamouchi, Mohamed  
CORPORATE SOURCE: Faculte de Medecine et de Pharmacie, Biologie et  
Biologie Moleculaire, Biochimie, Laboratoire de  
Chimie, Substances Naturelles, UFR, B.P. Rabat  
Instituts, Rabat, 6388, Morocco  
SOURCE: Journal of Ethnopharmacology (2003), 89(1), 165-169  
CODEN: JOETD7; ISSN: 0378-8741  
PUBLISHER: Elsevier Ireland Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB **Essential oils** of seven Moroccan **Labiatae**  
were chem. analyzed by GC-MS and evaluated for their in vitro antifungal  
activity against Botrytis cinerea. Among them, Origanum compactum and  
Thymus glandulosus greatly inhibited the growth of the mycelium. The  
inhibition of Botrytis cinerea was 100% for both oils at 100 ppm, while  
the IC50s were 35.1 and 79.2 ppm, resp. Mentha pulegium exhibited  
moderate activity at 250 ppm since the inhibition of the mycelial growth  
was 58.5% and the IC50 was 233.5 ppm. The main constituents of the  
studied oils were also examd. Thymol and carvacrol that are the two main  
constituents of Thymus glandulosus and Origanum compactum exhibited the  
strongest antifungal activity with 100% of inhibition at 100 ppm, resp.  
REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:459377 HCAPLUS  
DOCUMENT NUMBER: 139:380323  
TITLE: Antibacterial activity of 11 **essential**  
**oils** against Bacillus cereus in tyndallized  
carrot broth  
AUTHOR(S): Valero, M.; Salmeron, M. C.  
CORPORATE SOURCE: Escuela Politecnica Superior de Orihuela, Departamento  
de Produccion Vegetal y Microbiologia, Universidad  
Miguel Hernandez-Campus de Orihuela, Orihuela, 03312,  
Spain  
SOURCE: International Journal of Food Microbiology (2003),  
85(1-2), 73-81  
CODEN: IJFMDD; ISSN: 0168-1605  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The antibacterial activity of 11 **essential oils** from  
arom. plants against the strain INRA L2104 of the foodborne pathogen  
Bacillus cereus grown in carrot broth at 16.degree. was studied. The  
quantity needed by the **essential oils** of nutmeg, mint,  
clove, oregano, cinnamon, sassafras, sage, thyme or rosemary to produce  
14-1110% relative extension of the lag phase was detd. Total growth  
inhibition of bacterial spores was obsd. for some of the antimicrobial

agents assayed. The addn. of 5 .mu.l cinnamon **essential oil** per 100 mL of broth in combination with refrigeration temps. of .ltoreq.8.degree. produced the conditions necessary to inhibit the growth of B. cereus for at least 60 days in a model, refrigerated minimally processed food product, made with carrots and tyndallized. This is esp. important considering that the psychrotrophic enterotoxigenic strain of B. cereus INRA TZ415 was able to grow in this substrate at low temps. in the absence of any **essential oil**.

Furthermore, the study of the sensory characteristics of the final product suggests that the use of cinnamon **essential oil** can be considered as an alternative to "traditional food preservatives".

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:443688 HCAPLUS

DOCUMENT NUMBER: 139:2393

TITLE: Insect pest-repellent apparatus having plinth to support household furnishings and rails having insecticidal nonwoven fabric

INVENTOR(S): Yamatomi, Mitsuyo; Kawase, Shigeki

PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003164249	A2	20030610	JP 2001-365844	20011130
PRIORITY APPLN. INFO.:			JP 2001-365844	20011130

AB The app., which repels insect pests such as cockroaches and prevents their propagation, has a plinth, which is placed beneath an article requiring insect control, e.g. household elec. appliances, furniture, etc., and insecticides are diffused toward the plinth, e.g. using a rail having nonwoven fabric which is impregnated with liq. insecticides fed from a cartridge through a liq.-absorbing sheet and a liq.-feeding sheet and gradually releases the insecticide.

L27 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:443687 HCAPLUS

DOCUMENT NUMBER: 139:2392

TITLE: Insect pest-repellent apparatus having plinth to form space to diffuse insecticides beneath household furnishings

INVENTOR(S): Yamatomi, Mitsuyo; Kawase, Shigeki

PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003164248	A2	20030610	JP 2001-365843	20011130
PRIORITY APPLN. INFO.:			JP 2001-365843	20011130

AB The app., which prevents invasion of insect pests such as cockroaches, has a plinth, which is placed beneath an article requiring insect control, e.g. household elec. appliances, furniture, etc., and insecticides are

diffused into a space surrounded by the plinth using multiple nozzles linked among each other through connecting tubes. Periodical spraying of insecticides into the space effectively repels insect pests and prevents their propagation.

L27 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:154157 HCAPLUS  
DOCUMENT NUMBER: 138:182524  
TITLE: Plant oil and chemical compound having acaricidal activity  
INVENTOR(S): Lee, Hoi-Seon  
PATENT ASSIGNEE(S): S. Korea  
SOURCE: PCT Int. Appl., 19 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003015522	A1	20030227	WO 2002-KR1183	20020621
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			KR 2001-49383	A 20010816
			KR 2002-28529	A 20020522

AB Acaricidal compn., comprise plant oils extd. from member selected from at least one group consisting of *Pimpinella anisum*, *Laurus nobilis*, *Melaleuca leucadendron*, *Elettaria cardamomum*, *Pseudotsuga menziesii*, *Foeniculum vulgare*, *Ferula galbaniflua*, *Pelargonium odoratissimum*, *Pelargonium radens*, *Pelargonium capitatum*, *Helichrysum angustifolium*, *Andropogon muricatus*, *Lavandula officinalis*, *Origanum majorana*, *Melissa officinalis*, *Citrus aurantium*, *Melaleuca viridiflora*, *Ravensara aromatica*, *Sassafras albidum*, *Tagetes erecta*, *Tagetes patula*, *Verbena officinalis*, *Thujopsis dolabrata* and monoterpene compds. selected at least one group consisting of carvacrol, (+)-fenchol, geraniol, linalol, (-)-cis-myrtanol, trans-myrtanol, (-)-myrtenal, (-)-myrtenol, thujone, cis-verbenol, (-)-verbenone, menthone, eugenol, menthol, and indoline. The compns. have acaricidal effect on mites, such as *Dermatophagoides pteronyssinus* and *D. farinae*.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:44830 HCAPLUS  
DOCUMENT NUMBER: 138:282730  
TITLE: Inhibition of *Erwinia amylovora* and potential antagonistic bacteria by **essential oils** and natural compounds  
AUTHOR(S): Vanneste, J. L.; Boyd, R. J.  
CORPORATE SOURCE: HortResearch, Ruakura Research Centre, Hamilton, N. Z.  
SOURCE: Acta Horticulturae (2002), 590(Proceedings of the IXth International Workshop on Fire Blight, 2001), 315-317  
CODEN: AHORA2; ISSN: 0567-7572  
PUBLISHER: International Society for Horticultural Science  
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several **essential oils** have antibacterial properties, some of them have been found to inhibit *Erwinia amylovora* the causal agent of fire blight (Scortichini and Rossi, 1989; Vanneste, 1996). Whether or not, any of these compds. has a role in a strategy for control of fire blight has yet to be detd. In this study we looked at the potential impact on potential antagonistic bacteria (*Pantoea agglomerans* (formerly *Erwinia herbicola*) and *Pseudomonas fluorescens*) of some of the **essential oils** previously found inhibiting *E. amylovora* (Vanneste, 1996). The authors also looked at the ability of some terpenes and of other natural products (such as fungal metabolites) to inhibit *E. amylovora* and potential antagonistic bacteria.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:27931 HCAPLUS

DOCUMENT NUMBER: 139:84280

TITLE: Antibacterial activity of Turkish spice hydrosols

AUTHOR(S): Sagdic, Osman; Oezcan, Musa

CORPORATE SOURCE: Faculty of Agriculture, Department of Food Engineering, Suleyman Demirel University, Isparta, 32260, Turk.

SOURCE: Food Control (2003), 14(3), 141-143

CODEN: FOOCEV; ISSN: 0956-7135

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The in vitro antibacterial activity of the hydrosols of (distd. spice water) sixteen spices (anise, basil, cumin, dalamagia sage, dill, fennel, laurel, mint, oregano, pickling herb, rosemary, sage, summer savory, seafennel, sumac and black thyme) were tested on fifteen bacteria (*Bacillus amyloliquefaciens* ATCC 23842, *B. brevis* FMC 3, *B. cereus* FMC 19, *B. subtilis* var. *niger* ATCC 10, *Enterobacter aerogenes* CCM 2531, *Escherichia coli* ATCC 25922, *E. coli* O157:H7 ATCC 33150, *Klebsiella pneumoniae* FMC 5, *Proteus vulgaris* FMC 1, *Salmonella enteritidis*, *S. gallinarum*, *S. typhimurium*, *Staphylococcus aureus* ATCC 2392, *S. aureus* ATCC 28213, *Yersinia enterocolitica* ATCC 1501). The hydrosols of five spices (anise, cumin, oregano, summer savory and black thyme) had antibacterial activity against some of the test bacteria. Oregano and summer savory were effective against all bacteria during incubation. Anise, cumin and black thyme hydrosols were active against some bacteria, but not all. Consequently, it is likely that some edible plant hydrosols may be used as antimicrobial agents to prevent the deterioration of food products. The other hydrosols did not show activity against any of the all bacteria tested.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:591669 HCAPLUS

DOCUMENT NUMBER: 137:154384

TITLE: Symbiotic regenerative compositions containing microorganisms

INVENTOR(S): Schuer, Joerg-Peter

PATENT ASSIGNEE(S): Germany

SOURCE: Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1228769	A1	20020807	EP 2001-102384	20010202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
WO 2002067986	A2	20020906	WO 2002-EP1056	20020201
WO 2002067986	A3	20031211		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1390071	A2	20040225	EP 2002-712882	20020201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004076614	A1	20040422	US 2003-467040	20031204
PRIORITY APPLN. INFO.:				
			EP 2001-102384	A 20010202
			WO 2002-EP1056	W 20020201

AB The invention concerns regenerative drugs, dietary supplements, feed additives that contain microorganisms and modulating substances, e.g. enzymes, GRAS (Generally Recognized As Safe) aromas, plant exts. Further the compns. contain vitamins, minerals, growth promoters, carrier substances, etc. Microorganisms are a-pathogenic, pathogenic or facultative pathogenic,.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:562913 HCAPLUS

DOCUMENT NUMBER: 137:243392

TITLE: The potential use of plant volatiles for the control of stored product insects and quarantine pests in cut flowers

AUTHOR(S): Kostyukovsky, M.; Ravid, U.; Shaaya, E.

CORPORATE SOURCE: The Volcani Center, Bet Dagan, 50250, Israel

SOURCE: Acta Horticulturae (2002), 576(Proceedings of the International Conference on Medicinal and Aromatic Plants, 2001), 347-358

CODEN: AHORA2; ISSN: 0567-7572

PUBLISHER: International Society for Horticultural Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Currently, the measures to control pest infestation in grain and dry food products as well as quarantine treatments rely heavily upon the use of toxic fumigants and contact insecticides, which pose possible health hazards and risk of environmental contamination. This situation has led to the search for potential safe phyto-chems. as alternatives to replace the toxic fumigants mainly Me bromide and other **pesticides** for insect control. The fumigant activity of a large no. of **essential oils** and **essential oil** components extd. from arom. plants was evaluated on the major stored product insects *Sitophilus oryzae*, *Rhizopertha dominica*, *Tribolium castaneum*, *Oryzaephilus surinamensis*, *Ephestia cautella*, and also on the cut flowers quarantine pests *Bemisia tabaci*, *Frankliniella occidentalis* and *Liriomyza huidobrensis*. In this studies we could show that several compds. were found to be active fumigants at low concns. The most active compd. has proved to have similar potency as Me bromide against major insect pests of dry stored food. In space fumigation, at a mere concn. of 0.5-1.5 mg/L



air equiv. to 0.5-1.5 g/m<sup>3</sup> killed all adult insects after a 24 h exposure. In pilot tests, using wheat, low concns. of 50-70 g oil/m<sup>3</sup> grain were needed to obtain effective control of the test insects, compared with the recommended concn. of Me bromide of 30-50 g/m<sup>3</sup>. Addn. of CO<sub>2</sub> increased the activity of the oils and facilitated the penetration of these compds. in fumigated grain. Studies with cut flowers quarantine insects showed also great promise. A concn. of 10 g and 20 g/m<sup>3</sup> and exposure time of 2 and 4 h resp. were enough to get 100% adult mortality of *B. tabaci* and *F. occidentalis*, and 50-60 g/m<sup>3</sup> after 2 h exposure were need to kill *L. huidobrensis* larvae.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:543122 HCAPLUS

DOCUMENT NUMBER: 137:122139

TITLE: The in vitro action of **essential oils** on different organisms

AUTHOR(S): Giamperi, Laura; Fraternale, Daniele; Ricci, Donata

CORPORATE SOURCE: Istituto di Botanica e Orto Botanico "Pierina Scaramella", Urbino, 61029, Italy

SOURCE: Journal of Essential Oil Research (2002), 14(4), 312-318

CODEN: JEOREG; ISSN: 1041-2905

PUBLISHER: Allured Publishing Corp.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The antifungal action of eight (*Lavandula* hybrid, *Salvia officinalis* L., *Rosmarinus officinalis* L., *Thymus vulgaris* L., *Origanum vulgare* L., *Mentha piperita* L., *Coriandrum sativum* L. and *Laurus nobilis* L.)

**essential oils** was tested in vitro against *Phytophthora cinnamomi* Rads., *Pyrenochaeta lycopersici* Kleb. and *Verticillium dahliae* Kleb., using different concns. (up to 1600 ppm). The fungistatic + fungicidal activity of the oils was detd., and the most effective **essential oils** were found to be those of oregano, thyme, peppermint and coriander. Moreover, the oils were tested to det. the antifungal activity against two fungi (*Candida albicans*, *Trichophyton mentagrophytes*) that are pathogens for humans.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:536856 HCAPLUS

DOCUMENT NUMBER: 137:268115

TITLE: Composition and antifungal activity of **essential oil** from *Perilla frutescens* leaves

AUTHOR(S): Cai, Y.; Jiang, J. G.; Liu, C. H.; Kong, L. D.; Tan, R. X.

CORPORATE SOURCE: Institute of Functional Biomolecule, State Key Laboratory of Pharmaceutical Biotechnology, School of Life Sciences, Nanjing University, Nanjing, Peop. Rep. China

SOURCE: International Pest Control (2002), 44(2), 66-68

CODEN: IPCLBZ; ISSN: 0020-8256

PUBLISHER: Research Information Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The chem. compn. of **essential oil** obtained from *Perilla frutescens* (**Labiatae**) leaves was established by GC and GC/MS methods. Among the twenty identified constituents comprising 91.8% of the total oil, the major components were decahydro-1,6-dimethyl-naphthalene; (1E, 3a..alpha., 7a..beta.)-1-ethylideneoctahydro-7.alpha.-

methyl-1H-indene; 4,11,11-trimethyl-8-methylene-bicyclo[7.2.0]undec-4-ene; apiole; and patchouri alc. with their contents in the oil estd. to be 13.0%, 10.4%, 13.4%, 14.9% and 10.4%, resp. The in vitro bioassay showed that the oil exhibited remarkable inhibition to all of the eleven test phytopathogenic fungi, of which *Gaeumannomyces graminis* var. *tritici*, *Rhizoctonia cerealis* were most susceptible with the same min. inhibition concn. (MIC) of 150  $\mu\text{g/ml}$ . The MICs against the two fungi of triadimefon, a com. antifungal agent used here as the pos. control, were 125 and 100  $\mu\text{g/ml}$ , resp. These results highlighted a possibility that the antifungal oil of *P. frutescens* could be valuable for the control of some fungi-caused diseases such as "take-all", which leads annually to a 16% loss of wheat prodn.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:92832 HCAPLUS

DOCUMENT NUMBER: 136:196889

TITLE: In vitro susceptibility of Japanese mint (*Mentha arvensis* L.) **essential oil** against five human pathogens

AUTHOR(S): Rath, Chandi C.; Dash, S. K.; Mishra, R. K.

CORPORATE SOURCE: Centre for Post-graduate Studies in Microbiology, Orissa University of Agriculture and Technology, Bhubaneswar, 751 003, India

SOURCE: Indian Perfumer (2001), 45(1), 57-61

CODEN: IPERAS; ISSN: 0019-607X

PUBLISHER: Essential Oil Association of India

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **Essential oil** of the leaf of Japanese mint (*Mentha arvensis* L.; **Labiatae**) was found fungicidal against human pathogens, viz. *Candida albicans*, *Cryptococcus neoformans*, *Sporothrix schenckii*, *Microsporum gypseum*, and *Trichophyton rubrum*. The min. inhibitory concns. were obsd. for *C. albicans* and *C. neoformans* (< 1  $\mu\text{g/ml}$ ), followed by *M. gypseum* (1.95  $\mu\text{g/ml}$ ), *S. schenckii* (3.90  $\mu\text{g/ml}$ ) and *T. rubrum* (62.5  $\mu\text{g/ml}$ ) resp. The activity was temp. independent and occurred both at 28.degree.C. and 4.degree.C. Pure oil showed quicker fungicidal activity in comparison to MIC levels of oil in the medium. The activity was compared with antifungal drugs like clotrimazole, fluconazole, itraconazole, griseofulvin, amphotericin B, and nystatin.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:92828 HCAPLUS

DOCUMENT NUMBER: 136:366392

TITLE: Chemical composition and biological activity of **essential oil** of *Pogostemon plectranthoides* Desf.

AUTHOR(S): Singh, Dhananjaya P.; Pant, A. K.

CORPORATE SOURCE: Department of Chemistry, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, 263145, India

SOURCE: Indian Perfumer (2001), 45(1), 35-38

CODEN: IPERAS; ISSN: 0019-607X

PUBLISHER: Essential Oil Association of India

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Significant chem. variations have been found in the **essential oil** compn. of *Pogostemon plectranthoides* Desf. (**Labiatae**) growing in the Kumaon region of Uttaranchal. The oil was rich in

hydrocarbons such as .alpha.-phellandrene, .beta.-caryophyllene, .beta.-bisabolol, and .alpha.- and .gamma.-patchulene. The presence of a major compd. at Rt 46 min with M+ at m/e 214 was also noticed. The oil showed pronounced antifungal activity against a no. of phytopathogenic fungi and markedly inhibited the feeding by larvae of a lepidopteran problem pest in a no-choice bioassay.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:771422 HCAPLUS  
DOCUMENT NUMBER: 136:179278  
TITLE: Repellent, toxic and reproduction inhibitory effects of **essential oil** vapours on *Acanthoscelides obtectus* (Say) (Coleoptera: Bruchidae)  
AUTHOR(S): Papachristos, D. P.; Stamopoulos, D. C.  
CORPORATE SOURCE: Laboratory of Applied Zoology and Parasitology, University of Thessaloniki, Thessaloniki, 540 06, Greece  
SOURCE: Journal of Stored Products Research (2001), Volume Date 2002, 38(2), 117-128  
CODEN: JSTPAR; ISSN: 0022-474X  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Thirteen **essential oils** (*Apium graveolens*, *Citrus sinensis*, *Eucalyptus globulus*, *Juniperus oxycedrus*, *Laurus nobilis*, *Lavandula hybrida*, *Mentha microphylla*, *Mentha viridis*, *Ocimum basilicum*, *Origanum vulgare*, *Pistacia terebinthus*, *Rosmarinus officinalis*, and *Thuja orientalis*) were tested in their vapor form against *Acanthoscelides obtectus*. Choice and no-choice tests revealed that most of them have a repellent action, reduce fecundity, decrease egg hatchability, increase neonate larval mortality and adversely influence offspring emergence. Furthermore, some oils were strongly toxic to *A. obtectus*, males appearing more susceptible than females. Among the **essential oils** tested, the most toxic for males were those of *M. microphylla* and *M. viridis* whereas the most toxic against females were those of *L. hybrida* and *R. officinalis*.

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:578597 HCAPLUS  
DOCUMENT NUMBER: 135:124156  
TITLE: Bactericide combinations in detergents  
INVENTOR(S): Elsmore, Richard; Houghton, Mark Phillip  
PATENT ASSIGNEE(S): Robert McBride Ltd., UK  
SOURCE: Brit. UK Pat. Appl., 53 pp.  
CODEN: BAXXDU  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2354771	A1	20010404	GB 1999-23253	19991001
PRIORITY APPLN. INFO.:			GB 1999-23253	19991001

AB The detergent comprises a bactericide in combination with an anionic, cationic, nonionic or amphoteric surfactant which has a C12-18 alkyl group as the longest chain attached to the hydrophilic moiety. Creduret 50 (hydrogenated ethoxylated castor oil) 50, citric acid 12, formalin 10, sodium alkyl benzene sulfonate (C12-20) alkyl 1, perfume white line 0.5,

detergent enzyme savingase 0.2, and bactericide Pr 4-hydroxybenzoate 1.0 parts formed a detergent, showing redn. activity after contact 2.

L27 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:538654 HCAPLUS

DOCUMENT NUMBER: 135:329111

TITLE: Impedance measurements to study the antimicrobial activity of **essential oils** from Lamiaceae and Compositae

AUTHOR(S): Marino, M.; Bersani, C.; Comi, G.

CORPORATE SOURCE: Department of Food Science, University of Udine, Udine, 33100, Italy

SOURCE: International Journal of Food Microbiology (2001), 67(3), 187-195

CODEN: IJFMDD; ISSN: 0168-1605

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A wide range of **essential oils** from sage, mint, hyssop, chamomile and oregano were tested for their inhibitory effects against nine strains of Gram-neg. bacteria and six strains of Gram-pos. bacteria. Three principles were used in describing the antimicrobial effects of the **essential oils**: the overall antimicrobial activity detd. by use of an impedometric method, the bactericidal effect detd. as colony forming units after exposure to the **essential oils**, and the no. of apparent dead cells detd. after further enrichment. The data indicate that while the **essential oils** of sage, mint, hyssop and chamomile had generally a bacteriostatic activity, the **essential oil** from oregano appeared to be bactericidal at concns. above 400 ppm, probably because of high contents in phenolic compds. For the other **essential oils**, the chem. anal. was unable to explain the antimicrobial effect. The bacteriostatic activity was more marked against Gram-pos. bacteria; in contrast, the bactericidal activity was greatest against Gram-neg. bacteria. The most sensitive strain was Escherichia coli O157:H7 and, of the Gram-pos. species even at the lowest oil concns., Listeria innocua was the most sensitive. The data obtained from the study of the bactericidal effect of oregano **essential oil** indicated that the major part of the species was irreversibly inactivated, i.e. they could not be revived by enrichment.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:508681 HCAPLUS

DOCUMENT NUMBER: 135:177910

TITLE: Antimicrobial activity of the **essential oils** of Turkish plant spices

AUTHOR(S): Ozcan, M.; Erkmen, Osman

CORPORATE SOURCE: Department of Food Engineering, Faculty of Agriculture, University of Selcuk, Konya, 42031, Turk.

SOURCE: European Food Research and Technology (2001), 212(6), 658-660

CODEN: EFRTFO; ISSN: 1438-2377

PUBLISHER: Springer-Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The antimicrobial activity of the **essential oils** of 9 plant spices (savory, laurel, oregano, basil, cumin, seafennel, myrtle, pickling herb, and mint) were tested at 3 concns. (1, 10, and 15%) and tested on various microorganisms (Salmonella typhimurium, Bacillus cereus, Staphylococcus aureus, Enterococcus faecalis, Escherichia coli, Yersinia enterocolitica, Saccharomyces cerevisiae, Candida rugosa, Rhizopus oryzae,

and *Aspergillus niger*). The results showed that the **essential oils** tested varied in their antimicrobial activity. Individual or combinations of plant **essential oils** may provide an efficacious mixt. for the inactivation of pathogenic and spoilage microorganisms, and to achieve adequate shelf-life of foods.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:301273 HCAPLUS

DOCUMENT NUMBER: 134:350532

TITLE: In vitro fungistatic effect of **essential oils** against *Ascosphaera apis*

AUTHOR(S): Larran, Silvina; Ringuelet, Jorge A.; Carranza, Marcelo R.; Henning, Cynthia P.; Re, Maria S.; Cerimele, Elsa L.; Urrutia, Maria I.

CORPORATE SOURCE: Facultad de Ciencias Agrarias y Forestales Universidad Nacional de La Plata, La Plata, 1900, Argent.

SOURCE: Journal of Essential Oil Research (2001), 13(2), 122-124

CODEN: JEOREG; ISSN: 1041-2905

PUBLISHER: Allured Publishing Corp.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Different **essential oils** were tested against the fungus *Ascosphaera apis*, the causal agent of chalkbrood disease of honey bees. **Essential oils** from lavandin (*Lavandula .times. intermedia*), coriander (*Coriandrum sativum*), laurel leaf (*Laurus nobilis*), false camphor (*Cinnamomum glandulifera*), basil (*Ocimum basilicum*), tagetes (*Tagetes minuta*), rosemary (*Rosmarinus officinalis*) and eucalyptus (*Eucalyptus globulus*) were assayed to prove their fungistatic activity at different concns.: 700, 800, and 900 .mu.L/L. Strains of *Ascosphaera apis* were collected from apiaries of different places of Buenos Aires province (Argentina). At all concns. tested, coriander oil was the most effective fungistatic control while basil and tagetes oils were effective only at 800 .mu.L/L. No differences in effectiveness of oils were obsd. against the different strains of *Ascosphaera apis*.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:167794 HCAPLUS

DOCUMENT NUMBER: 134:227364

TITLE: Composition containing organic phenols for treatment of infections of humans and animals

INVENTOR(S): Ninkov, Dusan

PATENT ASSIGNEE(S): Van Beek Global/Ninkov L.L.C., USA

SOURCE: PCT Int. Appl., 77 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001015680	A1	20010308	WO 2000-US22640	20000817
WO 2001015680	C2	20020912		
WO 2001015680	C1	20031023		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,

KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
 MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
 TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,  
 MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6414036 B1 20020702 US 2000-499197 20000207  
 EP 1207865 A1 20020529 EP 2000-955671 20000817  
 EP 1207865 B1 20030806

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL

AT 246498 E 20030815 AT 2000-955671 20000817  
 NZ 517585 A 20030829 NZ 2000-517585 20000817  
 US 2003032678 A1 20030213 US 2002-143096 20020510  
 US 6649660 B2 20031118

## PRIORITY APPLN. INFO.:

US 1999-151858P P 19990901  
 US 2000-499197 A2 20000207  
 WO 2000-US22640 W 20000817

AB This disclosure provides pharmaceutical compns. which include oil ext. from plants from the **Labiatae** family showing activity against bacterial, fungal, protozoan, and yeast infections. In particular, the compns. can be formulated by combining exts. of **essential oils** from plants of the **Labiatae** and Verbenaceae families with an org. acid or a Group I salt. It is believed that the antimicrobial activity of the pharmaceutical compn. is due to the presence of org. phenols, such as isopropyl-o-cresol, in the oil ext. from the plants. For example, a 10% liq. formulation was prepd. by combining 48.5 mL org. phenolic Na salt (Na p-cresol, SPC, prepd. from isopropyl-o-cresol and NaCl), 48.5 mL org. phenolic K salt (K p-cresol, PPC, prepd. from isopropyl-o-cresol and KCl), 1.5 mL org. phenolic Na salt (Na M cresol, SMC, prepd. from iso-Pr cresol and NaCl), 1.5 mL org. phenolic K salt (K M cresol, PMC, prepd. from iso-Pr cresol and KCl), and 900 mL of a liq. carrier contg. polysorbate 80 (30% by wt.) as an emulsifier, EtOH (20% by wt.) and polyethylene glycol (40% by wt.). The combination was mixed at room temp. for 7 min at a speed of 1700 RPM to form a final (10%) soln. contg. a ratio of SPC and PPC to SMC and PMC of 97:3. The formulation showed in vitro inhibition zones against *Escherichia coli*, *Salmonella typhimurium*, and *Staphylococcus aureus* of 43, 20, and 39 mm, resp., while in neg. control petri dishes the bacterial species grew throughout the whole plate.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:90726 HCAPLUS

DOCUMENT NUMBER: 135:293793

TITLE: Volatile aroma constituents of three **Labiatae** herbs growing wild in the Karakoram-Himalaya district and their antifungal activity by vapor contact

AUTHOR(S): Inouye, Shigeharu; Uchida, Katsuhisa; Yamaguchi, Hideyo; Miyara, Takako; Gomi, Shuichi; Amano, Makoto

CORPORATE SOURCE: Teikyo University Institute of Medical Mycology, Hachioji, 192-0395, Japan

SOURCE: Journal of Essential Oil Research (2001), 13(1), 68-72  
 CODEN: JEOREG; ISSN: 1041-2905

PUBLISHER: Allured Publishing Corp.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Et acetate exts. from the flowers and leaves of *Perovskia abrotanoides* Karel., *Nepeta juncea* Benth., and *Thymus linearis* Beneth. growing wild at 2000-3500 m a.s.l. in the Karakoram-Himalaya district were analyzed by GC/MS. The major volatile constituents were 1,8-cineole (24.4-27.1%) and

.alpha.-pinene (18.2-23.2%) for *P. abrotanoides*, and nepetalactone (71.8%) for *N. juncea*. 2 Chemotypes of *T. linearis* were found in different area, a thymol/carvacrol type in the areas of Hunza and Rupal Valley, and a geraniol/geranyl acetate type in the area of Rakaposhi Valley. Herbs and their major constituents of *N. juncea* and *T. linearis* showed potent antifungal activity by vapor contact, but those of *P. abrotanoides* showed no significant activity.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 21 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:812138 HCAPLUS  
DOCUMENT NUMBER: 134:54072  
TITLE: Bacterial colonization of phyllosphere of Mediterranean aromatic plants  
AUTHOR(S): Karamanoli, K.; Vokou, D.; Menkissoglu, U.; Constantinidou, H.-I.  
CORPORATE SOURCE: Laboratory of Agricultural Chemistry, School of Agriculture, Aristotle University, Thessaloniki, GR-54 006, Greece  
SOURCE: Journal of Chemical Ecology (2000), 26(9), 2035-2048  
CODEN: JCECD8; ISSN: 0098-0331  
PUBLISHER: Kluwer Academic/Plenum Publishers  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The influence of secondary metabolites on the bacterial colonization of the phyllosphere of four arom. species of the Mediterranean region was studied for the detn. of total bacterial populations (TBP) and populations of ice nucleation active bacteria (INA). The arom. plants used were lavender (*Lavandula angustifolia*), rosemary (*Rosmarinus officinalis*), Greek sage (*Salvia fruticosa*), and Greek oregano (*Origanum vulgare* subsp. *hirtum*), all growing in neighboring sites. Lavender was heavily colonized by bacteria, whereas rosemary, sage, and oregano were poorly colonized. The differences in bacterial colonization were related to the plants' content of secondary metabolites and their antimicrobial activity, as recorded in the in vitro bioassays. Lavender had the lowest amt. of surface phenolics, the lowest concn. of **essential oil**, and the overall weakest antibacterial activity. Among the epiphytic bacteria, ice nucleation active ones were not detected on oregano and sage leaves but were found in extremely low nos. on those of rosemary and lavender. For this reason, these arom. plants were further studied regarding their effect against two INA bacteria, *Pseudomonas syringae* and *Erwinia herbicola*. Min. inhibitory concns. and min. bactericidal concns. were estd. for the **essential oils** and for their main constituents under different bacterial populations. The antibacterial effect of **Labiatae** arom. plants against INA bacteria not only explains the scare presence of the latter on their leaves but may have applications in agriculture as a frost-control method for sensitive crops.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 22 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:259917 HCAPLUS  
DOCUMENT NUMBER: 132:261680  
TITLE: **Essential oils as pesticides**  
INVENTOR(S): Tuzun, Sadik; Yegen, Oktay  
PATENT ASSIGNEE(S): Auburn University, USA  
SOURCE: PCT Int. Appl., 89 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000021364	A2	20000420	WO 1999-US23399	19991008
WO 2000021364	A3	20000810		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2346763	AA	20000420	CA 1999-2346763	19991008
EP 1119257	A2	20010801	EP 1999-954778	19991008
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
NZ 511021	A	20030829	NZ 1999-511021	19991008
PRIORITY APPLN. INFO.:			US 1998-103805P	P 19981009
			WO 1999-US23399	W 19991008

AB A compn. to repel or kill insects, fungi, nematodes and bacteria, comprising, as an active ingredient, an **essential oil** or a component thereof, wherein said **essential oil** or component thereof is derived from at least one plant species in the Family **Labiatae** and **Umbellifera** is disclosed. Specifically, the **essential oils** are from Thymbra, Satureja, Origanum, Corydothymus, Pinpinella or Foeniculum. The **essential oil** components are cis- and trans-anethole, anisaldehyde, anis ketone, .beta.-bisabolene, borneol, bornyl acetate, cadidene, camphene, camphor, .DELTA.-3- and .DELTA.-4-carene, caryophyllene, carvone, carvacrol, .gamma.-caryophyllene, cinnamic aldehyde, citral, citronellal, cineol, etc.

L27 ANSWER 23 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:755236 HCAPLUS

DOCUMENT NUMBER: 132:313405

TITLE: Volatile constituents and antimicrobial activity of Zataria multiflora, population Iran

AUTHOR(S): Shafiee, Abbas; Javidnia, Katayon; Tabatabai, Mojtaba

CORPORATE SOURCE: Department of Chemistry, The Medical Sciences University of Tehran, Tehran, 14174, Iran

SOURCE: Iranian Journal of Chemistry & Chemical Engineering (1999), 18(1), 1-5  
CODEN: IJCEE9; ISSN: 1021-9986

PUBLISHER: Jahad Daneshgahi

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The **essential oils** of Z. multiflora (**Labiatae**) from 4 regions of Iran were investigated by GC and GC-MS methods. The main constituents were carvacrol, thymol, linalool and p-cymene. The percent of the constituents (in dry and wet plant) of different regions were compared. Antibacterial and antifungal effects of these **essential oils** were studied. The **essential oil** with highest percentage of thymol and carvacrol had a significant antimicrobial activity.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 24 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:807556 HCAPLUS

DOCUMENT NUMBER: 130:135340



TITLE: Dissipation of propiconazole and tebuconazole in  
peppermint crops (*Mentha piperita* (**Labiatae**  
)) and their residues in distilled oils

AUTHOR(S): Garland, Sandra M.; Menary, Robert C.; Davies, Noel W.

CORPORATE SOURCE: Department of Agricultural Science, University of  
Tasmania, Hobart, 7001, Australia

SOURCE: Journal of Agricultural and Food Chemistry (1999),  
47(1), 294-298  
CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The broad-spectrum, systemic **fungicides** propiconazole and  
tebuconazole are used to control rust in peppermint (*Mentha piperita* L.).  
An anal. method, using gas chromatog. combined with detection by  
high-resoln. mass spectrometry, was developed to allow for the  
simultaneous monitoring of both **pesticides** in peppermint leaves  
and oil. Field trials were established to det. the rate of dissipation of  
tebuconazole and propiconazole in peppermint crops. Three applications of  
each **fungicide** were trialed at two rates (125 and 250 g of  
active ingredient (ai)/ha). At harvest, 64 days after the final  
application, propiconazole was detected at levels of 0.06 mg/kg and 0.09  
mg/kg of dry wt., and tebuconazole was detected at 0.26 and 0.80 mg/kg dry  
wt., in identical trials. Rates of dissipation of propiconazole and  
tebuconazole were lower at a second trial site, where three applications  
of 125 g/ha ai for each **fungicide** resulted in residue levels of  
0.21 mg/kg for both **pesticides**, detected 89 days after the last  
application. Propiconazole and tebuconazole were detected in the distd.  
oil at levels between 0.02 and 0.05 mg/kg and between 0.011 and 0.041  
mg/kg, resp. Propiconazole had a higher tendency to co-distill with the  
peppermint oil, with 0.7% of that present in the vegetative material  
ending up in the oil, compared to 0.09% of tebuconazole.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 25 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:535721 HCAPLUS

DOCUMENT NUMBER: 129:166247

TITLE: Essence of **Labiatae** as transdermal  
absorption enhancer, and topical preparations  
containing the enhancer

INVENTOR(S): Honda, Yoshiaki; Yokomizo, Yuichi

PATENT ASSIGNEE(S): Pola Chemical Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10218796	A2	19980818	JP 1997-25459	19970207
JP 3445716	B2	20030908		

PRIORITY APPLN. INFO.: JP 1997-25459 19970207

AB Topical prepn. contain active ingredients (e.g. anti-inflammatory agents  
or microbicides) and essence of **Labiatae** as transdermal  
absorption enhancer. A lotion contg. tenoxicam and essence of *Perilla  
frutescens* var. *crispa* showed good bioavailability through isolated guinea  
pig skin.

L27 ANSWER 26 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:775109 HCAPLUS

DOCUMENT NUMBER: 128:45760  
 TITLE: Antifungal activity of the **essential oil** of *Hyptis suaveolens* and its efficacy in biocontrol measures in combination with *Trichoderma harzianum*  
 AUTHOR(S): Singh, H. B.; Handique, A. K.  
 CORPORATE SOURCE: School of Agricultural Sciences & Rural Development, North-Eastern Hill University, Medziphema, 797 106, India  
 SOURCE: Journal of Essential Oil Research (1997), 9(6), 683-687  
 CODEN: JEOREG; ISSN: 1041-2905  
 PUBLISHER: Allured Publishing Corp.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The **essential oil** from the leaves of *Hyptis suaveolens* (L.) Poit. (Family-**Labiatae**), a herbaceous annual weed, displayed significant antifungal activity against the soil-borne sclerotial fungi, *Rhizoctonia solani*, *Sclerotium rolfsii* and *Sclerotinia sclerotiorum*. Treatment with the oil drastically reduced the ascospore germination of *S. sclerotiorum*. More importantly, the oil in combination with antagonistic fungus *Trichoderma harzianum* controlled wilt and rot diseases of knol-khol (*Brassica caulorapa* Pasq.) caused by *S. sclerotiorum*. The oil appears to inhibit the fungal growth, but does not destroy the viability of the three sclerotial fungi.  
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 27 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1996:586506 HCAPLUS  
 DOCUMENT NUMBER: 125:230313  
 TITLE: Analysis of the **essential oil** of **Laurus nobilis** L.  
 AUTHOR(S): Soliman, F. M.; El-Kashoury, E. A.; El-Fishawy, A. M.; El-Kawy, M. A. Abd  
 CORPORATE SOURCE: Department Pharmacognosy, Faculty Pharmacy, Cairo, 11562, Egypt  
 SOURCE: Bulletin of the Faculty of Pharmacy (Cairo University) (1994), 32(3), 387-389  
 CODEN: BFPHA8; ISSN: 1110-0931  
 PUBLISHER: Cairo University, Faculty of Pharmacy  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The compn. of the oil prepd. from the leaves of **Laurus nobilis** L. was detd. by gas chromatog.-mass spectrometry (GC-MS) techniques. Twenty-eight components representing >98% of the oil compn. were identified. The main constituents were: 1,8-cineole (37.58%), p-cymene (19.83%), .alpha.-terpinenyl acetate (7.14%), myrcene (4.68%), .beta.-pinene (3.73%), 4- and .alpha.-terpineols, linalool, and Me eugenol. The oil showed a moderate antifungal activity against *Candida albicans*, *Cryptococcus neoformans* and *Mycobacterium intracellulare*, when compared with amphotericin B.

L27 ANSWER 28 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:786243 HCAPLUS  
 DOCUMENT NUMBER: 123:193416  
 TITLE: Antimicrobial activity of essences from **labiates**  
 AUTHOR(S): Larrondo, Jorge V.; Agut, M.; Calvo-Torras, M. A.  
 CORPORATE SOURCE: Fac. Veterinary Sci., Univ. Autonoma de Barcelona, Bellaterra, 08193, Spain  
 SOURCE: Microbios (1995), 82(332), 171-2  
 CODEN: MCBIA7; ISSN: 0026-2633

PUBLISHER: Faculty Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Bacteria, filamentous fungi and yeasts were subjected to the action of *Lavandula officinalis*, *Melissa officinalis* and *Rosmarinus officinalis* essences in a steam phase, using a microatmospheric technique. Due to the methodol. employed, *L. officinalis* essence was more active in filamentous fungi than the other **essential oils** studied. All three essences possessed a similar degree of activity against the microorganisms tested, though a relatively higher activity was seen in the case of *M. officinalis*.

L27 ANSWER 29 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:535400 HCAPLUS

DOCUMENT NUMBER: 119:135400

TITLE: Antibacterial properties of the Vietnamese Cajeput oil and *Ocimum* oil in combination with **antibacterial agents**

AUTHOR(S): Jedlickova, Z.; Mottl, O.; Sery, V.

CORPORATE SOURCE: Postgrad. Med. Pharm. Inst., Prague, 128 00, Czech.

SOURCE: Journal of Hygiene, Epidemiology, Microbiology, and Immunology (1992), 36(3), 303-9  
CODEN: JHEMA2; ISSN: 0022-1732

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Main antibacterially active agents obtained from Cajeput **essential oil** (1,8 cineol, linalool, .alpha.-terpineol and terpinen-4-ol) for example from *Melaleuca leucadendron* (Myrtaceae) as well as **essential oil** from *Ocimum gratissimum* (**Labiata**) were combined in tests in vitro with selected antibiotics. The above mentioned plant products were found to be effective medicaments for local application in modern medical practice. Combinations with antibodies potentiated their therapeutical action. On the basis of tests in vitro the synergistic action of these two kinds of medicaments, i.e., preps. traditionally used for a few last decades - antibiotics - might be well applied for therapeutical needs.

L27 ANSWER 30 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:513197 HCAPLUS

DOCUMENT NUMBER: 119:113197

TITLE: Potential use of the **essential oil** of *Trachyspermum ammi* against seed-borne fungi of *Guar* (*Cyamopsis tetragonoloba* L. (Taub.))

AUTHOR(S): Dwivedi, Suresh K.; Dubey, N. K.

CORPORATE SOURCE: Cent. Adv. Study Bot., Banaras Hindu Univ., Varanasi, India

SOURCE: Mycopathologia (1993), 121(2), 101-4

CODEN: MYCPAH; ISSN: 0301-486X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **Essential oils** isolated from leaves and seeds of 7 **umbelliferous** plants were tested against the growth of *Aspergillus flavus*. Those from seeds of *Trachyspermum ammi*, *Cuminum cyminum*, *carum carvi*, *Daucus carota* and from leaves of *Anethum graveolens* exhibited antifungal activity against the test fungus. Amongst these, oil from seeds of *Trachyspermum ammi* was most toxic. Its min. inhibitory concn. was 300 ppm, at which it exhibited fungistatic but not phytotoxic properties, when tested at 200, 300 and 400 ppm. The fungitoxic potency of *Trachyspermum* seed oil remained unchanged after a long storage period and at high inoculum d. of the test fungus. The oil was thermostable and was more effective than the **fungicides** Agrosan G. M., Benlate, Ceresan, Dithane M-45 and Thiovit commonly used for the control of plant diseases.

L27 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:548152 HCAPLUS  
DOCUMENT NUMBER: 105:148152  
TITLE: Studies of the effects of **essential oils** isolated from 14 species of **Labiatae** on the carmine spider mite, *Tetranychus cinnabarinus*  
AUTHOR(S): Mansour, F.; Ravid, U.; Putievsky, E.  
CORPORATE SOURCE: Dep. Entomol., ARO, Haifa, Israel  
SOURCE: Phytoparasitica (1986), 14(2), 137-42  
CODEN: PHPRA2; ISSN: 0334-2123  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB **Essential oils** from 14 species of **Labiatae** were steam-distd. and analyzed. Bean leaf disks freshly sprayed with different concns. of the acetonc solns. of the oils caused mortality and induced repellency in adult females of the carmine spider mite, *T. cinnabarinus*, and egg-laying was reduced. Seven-day-old residues still had some activity. On the basis of median effective concn. values, the most effective oils were: *Lavandula angustifolia* .times. *L. latifolia* (0.09%); *L. angustifolia* (0.1%); *Melissa officinalis* (0.12%); *Mentha piperita* (1.3%); *Salvia fruticosa* (1.4%); *Ocimum basilicum* (1.4%); and *Rosmarinus officinalis* (2.2%).

L27 ANSWER 32 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:126563 HCAPLUS  
DOCUMENT NUMBER: 104:126563  
TITLE: *Bupleurum fruticosum* L. (fam. **Umbelliferae**), an interesting shrub of the northern Moroccan flora  
AUTHOR(S): Manunta, Antonio  
CORPORATE SOURCE: Fac. Farm., Univ. Sassari, Sassari, Italy  
SOURCE: Actes - Colloq. Int. Plant. Aromat. Med. Maroc, 1st (1985), Meeting Date 1984, 271-84. Editor(s): Bellakhdar, Jamal. Cent. Natl. Coord. Planif. Rech. Sci. Tech.: Rabat, Morocco.  
CODEN: 54YJA2  
DOCUMENT TYPE: Conference  
LANGUAGE: French

AB Saikosaponins of undefined structure were isolated from the roots of *B. frutisum* (7.5% of dry wt.). The antiinflammatory properties of the crude ext. were demonstrated on male Wistar rats. Aerial parts of the plant yielded an **essential oil** fraction, the primary constituents of which were .beta.-phellandrene (64.5%) and sabinene (20.7%). The **essential oil** fraction showed antimicrobial activity towards *Streptococcus* and *Staphylococcus*, and was particularly effective against *Candida albicans*.

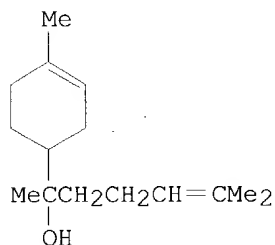
L27 ANSWER 33 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:569127 HCAPLUS  
DOCUMENT NUMBER: 91:169127  
TITLE: Antimicrobial activity of the **essential oil** from *Leucas stelligera* Wall ( **Labiatae**)  
AUTHOR(S): Sharma, G. P.; Jain, N. K.; Garg, B. D.  
CORPORATE SOURCE: Dep. Chem., Holkar Sci. Coll., Indore, India  
SOURCE: Indian Drugs & Pharmaceuticals Industry (1978), 13(3), 37-8  
CODEN: IDPIA6; ISSN: 0019-4638  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The **essential oil** from *Leucas stelligera* showed antibacterial activity against 8 of 10 tested bacteria and antifungal

activity against 5 of 10 tested fungi. Phys.-chem. properties are reported for the **essential oil**, which was obtained by steam distn. of dried leaves and flowers of the plant. The antimicrobial activity was detd. by an agar diffusion method with oil-soaked filter paper disks.

L27 ANSWER 34 OF 34 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1977:496715 HCAPLUS  
 DOCUMENT NUMBER: 87:96715  
 TITLE: Study of the antimycotic effects of biologically active components of Matricaria chamomilla L  
 AUTHOR(S): Szalontai, Marianne; Verzar-Petri, Gizella; Florian, Ede  
 CORPORATE SOURCE: Fac. Pharm., Semmelweis Med. Univ., Budapest, Hung.  
 SOURCE: Parfuemerie und Kosmetik (1977), 58(5), 121-7  
 CODEN: PAKOAL; ISSN: 0031-1952  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 GI



I

AB The biol. active components of M. chamomilla, including total flavonoids, total **essential oils**, cyclic ethers, chamazulene [529-05-5], .alpha.-bisabolol (I) [515-69-5], and **umbelliferone** [93-35-6], exhibited varying degrees of fungistatic activity. I and the cyclic ethers had significant effects at only 100 .mu.g/mL, and I was fungicidal to Candida albicans following a 30-min exposure of the yeast to a 1000 .mu.g/mL concn.

=> d stat que

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR  
CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR  
CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL  
OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE  
OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL  
OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA  
L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME  
L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFER  
A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR  
PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS  
OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM  
OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16  
L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19  
L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18  
L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998  
L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR  
LAURUS OR MOBILIS  
L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL  
L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)  
L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?  
L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE  
? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

=>

=>

=> d ibib abs hitrn l33 1-19

L33 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:837191 HCAPLUS

DOCUMENT NUMBER: 138:51334

TITLE: Pesticidal character of phytoecdysteroids from *Ajuga  
multiflora* Bunge (**Labiatae**) on larvae of  
*Cryptorrhynchus lapathi* L. (Coleoptera: Curculionidae)  
AUTHOR(S): Chi, De-fu; Sun, Ming-xue; Xia, Wen-fu  
CORPORATE SOURCE: College of Forest Resources and Environment, Northeast  
Forestry University, Harbin, 150040, Taiwan  
SOURCE: Journal of Forestry Research (English Edition) (2002),  
13(3), 177-182  
CODEN: JFREAT; ISSN: 1007-662X

PUBLISHER: Journal of Forestry Research

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Eight kinds of phytoecdysteroids extd. from different parts of *Ajuga multiflora* Bunge (**Labiatae**) that were collected from different places at different time were tested for killing effects on the 2-instar larvae of *Cryptorhynchus lapathi* by adding them to the artificial diet of larvae. The exptl. results indicated that adding 1-3-mL phytoecdysteroids to the artificial diet could lead 58%-100% of 2-instar larvae of *C. lapathi* to death within 24 days. The phytoecdysteroids extd. from the whole plant of *A. multiflora* which was collected before flowering time were much more effective than those extd. from the plants collected at flowering and after flowering periods, and the modified mortality rate of larvae reached 65.22%, 85.07%, and 98.11% at the dosage level of 1-mL, 2-mL, and 3-mL exts., resp. The ext. made from root of *A. multiflora* plant was more effective in killing efficiency than those from stem and leaves, and the av. death rates of larvae were up to 100%, 98.20% and 98.32% at dosage levels of 1-mL, 2-mL, and 3-mL exts., resp. The killing speed of the extd. phytoecdysteroids was slower than that of triflumuron, hexaflumuron or deltamethrin **emulsifiable** conc. The mortality rate of larvae is closely related to the feeding duration on the diets contg. phytoecdysteroids. Feeding on the diets with addn. of phytoecdysteroids for 16 days, more than 80% of treated 2-instar larvae of *C. lapathi* were led to death. The killing effect of the exts. was little affected by the growth areas of *A. multiflora* plant and the adding way to artificial diet.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:695702 HCAPLUS

DOCUMENT NUMBER: 137:200621

TITLE: **Labiatae** herb extracts and hop extracts for extending the color life and inhibiting the growth of microorganisms in fresh meat, fish and poultry  
INVENTOR(S): Reynhout, Gregory S.; Berdahl, Donald R.; Schulze, Mark H.

PATENT ASSIGNEE(S): Kalsec, Incorporated, USA

SOURCE: PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002069741	A1	20020912	WO 2001-US22532	20010713
W: AU, CA, MX, NZ, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1363510	A1	20031126	EP 2001-961658	20010713
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.: US 2001-273185P P 20010302

WO 2001-US22532 W 20010713

AB **Labiatae** herb ext. and a hop ext. contg. .beta.-acids are used to extend the color life and retard the growth of bacteria in fresh meat, fish and poultry stored in an atm. that contains .gtoreq.20% oxygen. Thus, ground beef supplemented with rosemary ext. (equiv. to 20 ppm carnosic acid in the beef) and hop ext. (equiv. to 194 ppm .beta.-acids in beef) showed a greatly enhanced storage life in a modified atm. (80% oxygen, 20% carbon dioxide).

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## L33 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:654813 HCAPLUS  
 DOCUMENT NUMBER: 127:336470  
 TITLE: Antibacterial, low-irritation cosmetics  
 INVENTOR(S): Terai, Makoto  
 PATENT ASSIGNEE(S): Noevir K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09255518	A2	19970930	JP 1996-90484	19960319
PRIORITY APPLN. INFO.:			JP 1996-90484	19960319
OTHER SOURCE(S): MARPAT 127:336470				

AB Antibacterial, low-irritation cosmetics comprise N-long chain acyl basic amino acid derivs. and/or their acid addn. salts 0.001-0.5 and antibacterial plant exts. 0.01-20.0 wt.%. A lotion contained ethanol 7.0, 1,3-butylene glycol 6.0, glycerin 2.0, ethoxylated hardened castor oil 0.6, N-cocoyl-L-arginine Et ester DL-pyrrolidonecarboxylic acid salt 0.2, Arnica montana exts. 1.0, perfumes 0.06 and purified water to 100 wt.%. Plant exts. synergistically enhanced the antibacterial activity of N-long chain acyl basic amino acids derivs.

## L33 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:650176 HCAPLUS  
 DOCUMENT NUMBER: 127:336465  
 TITLE: Antibacterial, low-irritation cosmetics  
 INVENTOR(S): Terai, Makoto  
 PATENT ASSIGNEE(S): NOEVIR Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09255519	A2	19970930	JP 1996-90485	19960319
PRIORITY APPLN. INFO.:			JP 1996-90485	19960319

AB Antibacterial, low-irritation cosmetics comprise polyhydric alcs. and/or their alkyl ethers .gtoreq. 5.0 and antibacterial plant exts. 0.01-20.0 wt.%. A lotion contained ethanol 7.0, 1,3-butylene glycol 6.0, glycerin 2.0, ethoxylated hardened castor oil 0.6, N-cocoyl-L-arginine Et ester DL-pyrrolidonecarboxylic acid salt 0.2, Arnica montana exts. 1.0, perfumes 0.08 and purified water to 100 wt.%. Plant exts. synergistically enhanced the antibacterial activity of polyhydric alcs. and/or their alkyl ethers.

## L33 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:58182 HCAPLUS  
 DOCUMENT NUMBER: 124:90184  
 TITLE: Making black dyed silk products darker with change in shade  
 INVENTOR(S): Onoda, Keizo; Fujisaki, Katsuhide  
 PATENT ASSIGNEE(S): Toei Kk, Japan; Fujisaki Senko Kk  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent



LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07279066	A2	19951024	JP 1994-85754	19940329
JP 2516571	B2	19960724		

PRIORITY APPLN. INFO.: JP 1994-85754 19940329

AB The title process involves treating black silk dyed by direct dyes with an **emulsion** of oxidized polyethylene wax and **Labiatae** oil and an **emulsion** of perfluorocarbon-acrylate copolymer (e.g., Dicguard F90, Asahiguard AG-480)-based water- and oil-**repellent emulsion**. A dyed fabric of L value 14.02, a value +1.96, and b value +0.88 was obtained from L value 15.41, a value -0.06, and b value +0.14 before finishing.

L33 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1971:124019 HCAPLUS

DOCUMENT NUMBER: 74:124019

TITLE: Action of some **pesticides** against *Dynaspidiotus britannicus* and its parasites

AUTHOR(S): Nikolaishvili, A. A.

CORPORATE SOURCE: USSR

SOURCE: Subtropicheskie Kul'tury (1970), (4), 174-5  
 CODEN: SUKUA8; ISSN: 0491-4031

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The following **pesticides** were tested against the title pests of bay-trees (*Laurus nobilis*) in the lab. and on farms of Western Georgia; Sumithion, Nexion, carbophos, phosalone, and metathion. **Pesticide emulsions** were sprayed in 0.1, 0.2, or 0.3% concns. of the active ingredient. The effectiveness of the **pesticides** was detd. by counting on the 15th and 16th days after spraying the no. of killed insects and their parasites. Phosalone, metathion, and carbophos at 0.3% concn. killed 97-8% of the insect species. The degree of toxicity of each of these **emulsions** resembled nearly that of 0.3% B58 (control). Such a level of **insecticide** kill could not be achieved with lower concns. of these preps., or with Nexion or Sumithion. Only a small no. of parasites of *D. britannicus*, mainly adult forms, were killed with the 0.3% methathion and Sumithion **emulsions**.

L33 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1961:139558 HCAPLUS

DOCUMENT NUMBER: 55:139558

ORIGINAL REFERENCE NO.: 55:26350e-h

TITLE: Effectiveness of new **insecticides** against the harlequin cabbage bug on collards

AUTHOR(S): Hofmaster, R. N.

CORPORATE SOURCE: Virginia Truck Expt. Sta., Painter

SOURCE: Journal of Economic Entomology (1959), 52, 777-8  
 CODEN: JEENAI; ISSN: 0022-0493

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Five expts. involving 21 **insecticides** and 49 different treatments were conducted against both nymphs and adults of *Murgantia histrionica*. All **insecticides** were tested as sprays in **emulsion** form except Dylox (O,O-di-Me 2,2,2-trichloro-1-hydroxyethylphosphonate) (sol. powder) and sabadilla (20% dust) and were applied to the Vates variety of collards at 0.25-5.0 lb. active compds./acre. Sevin (1-naphthyl N-methylcarbamate) and Thiodan (6,7,8,9,10,10-hexachloro - 1,5,5a,6,9,9a - hexahydro - 6,9 - methano

-2,4,3-benzodioxathiepin 3-oxide) gave 109% knockdown in 6 hrs. or less at 0.5 lb./acre. Trithion [S-(p-chlorophenylthio)methyl O,O-di-Et phosphorodithioate] and Dylox were slower in action but eventually gave excellent control. Statistical analysis showed that DDT, Perthane [1,1-dichloro-2,2-bis(p-ethylphenyl)ethane], 20% sabadilla, and Union Carbide Chemicals Compound 8305 (p-chloro-2,4-dioxa-5- methyl- p- thiono -3- phosphabicyclo[4.4.0] decane) were significantly less effective than the other compds. against adult harlequin bugs. Extensive feeding damage occurred in these treatments. Last instar nymphs were easier to control but the order of relative insecticidal effectiveness was the same. A combination of parathion and toxaphene gave better results than either chemical used separately.

L33 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1961:127051 HCAPLUS  
DOCUMENT NUMBER: 55:127051  
ORIGINAL REFERENCE NO.: 55:23909a-c  
TITLE: **Insecticides** for control of the winter tick  
AUTHOR(S): Drummond, R. O.; Moore, Bobby; Warren, Jack  
SOURCE: Journal of Economic Entomology (1959), 52, 1220-1  
CODEN: JEENAI; ISSN: 0022-0493  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB Sprays of Delnav (p-dioxane-2,3-dithiol S,S-bis(O,O-di-Et phosphorodithioate)), Ronnel, Co-Ral [O-(3-chloro-4-methylumbelliferone) O,O-di-Et phosphorothioate], Bayer 22,408 (O,O-di-Et O-naphthalimidophosphorothioate), Sevin (1-naphthyl N-methylcarbamate), malathion, and toxaphene were applied to Hereford cattle to control Dermacentor albipictus. All the treatments reduced the tick population and 0.5% Co-Ral, as a wettable powder, gave the most effective control as compared with the standard toxaphene spray (at 0.5% from **emulsifiable** concentrate). Malathion gave the poorest control, failing to prevent reinfestation by adults emerging from nymphal skins.

L33 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1961:107915 HCAPLUS  
DOCUMENT NUMBER: 55:107915  
ORIGINAL REFERENCE NO.: 55:20301g-i,20302a  
TITLE: Relative efficacy of several materials for control of poultry ectoparasites  
AUTHOR(S): Kraemer, Paul  
CORPORATE SOURCE: Univ. of California, Berkeley  
SOURCE: Journal of Economic Entomology (1959), 52, 1195-9  
CODEN: JEENAI; ISSN: 0022-0493  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB Argas persicus was effectively controlled by a 1% **emulsion** of Sevin (1-naphthyl N-methylcarbamate) applied as a premise spray in conjunction with a 0.5% **emulsion** spray applied to the birds at the rate of 1 gal./100 birds. Promising but inconclusive results were obtained with Dibrom (O,O-dimethyl-O-(1,2-dibromo-2,2-dichloroethyl) phosphate) and Korlan (O,O-dimethyl O-(2,4,5-trichlorophenyl)phosphorothioate) sprays. A 1% Dylox (O,O-dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate) spray applied to premises and birds gave unsatisfactory control of the fowl tick. Menacanthus stramineus was effectively controlled with Dylox soln., 0.5%, spray, 1 gal./100 birds; Korlan **emulsion**, 0.1%, spray, 1 gal./100 birds, in conjunction with nest and litter spray; Sevin **emulsion**, 0.5% spray, 1 gal./100 birds; Sevin dust, 0.5%, 4 oz./100 birds. Promising but inconclusive results were obtained with 0.25% Korlan suspension spray. Ornithonyssus sylviarum was effectively controlled with sprays at 1 gal./100 birds: Co-Ral (O,O-diethyl O-(3-chloro-4-methyl-7-coumarinyl)

phosphorothioate) suspension, 0.1%; Dibrom **emulsion**, 0.25%; Korlan **emulsion**, 0.25%; Sevin **emulsion**, 0.25%; Sevin suspension, 0.5%. A 5% Sevin dust applied by puff duster at the rate of 4 oz./100 birds was also effective. Unsatisfactory control followed use of Tedion (2,4,4',5-tetraclorodiphenyl sulfone, 80% tech.) suspension spray, 0.1%, 1 gal./100 birds; 3.6-4 oz./100 birds of 15%, Delphene (N,N-diethyl-m-toluamide) dust, 4% Dibrom dust, or 3% Tedion dust; 0.3 oz. of Santocel (a powdery silica aerogel) dust/100 birds; 1% suspension of Dowco 109 [O-(4-tert-butyl-2-chlorophenyl) O-methyl methylphosphoramidothioate].

L33 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1961:101583 HCAPLUS

DOCUMENT NUMBER: 55:101583

ORIGINAL REFERENCE NO.: 55:19109i,19110a-b

TITLE: Studies with Bayer 21/199-P32 sprayed on cattle

AUTHOR(S): Robbins, William E.; Hopkins, Theodore L.; Darrow, Darrell I.; Eddy, Gaines W.

SOURCE: Journal of Economic Entomology (1959), 52, 214-17

CODEN: JEENAI; ISSN: 0022-0493

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The metabolism, excretion, and tissue distribution of P32-labeled Bayer 21/199 were studied following spray application on 2 Hereford bulls. Only low levels of radioactive compds. were found in the blood, and these behaved like polar degradation products. The compd. was sparingly absorbed, about 2.4 (suspension) and 6.3% (**emulsion**) of the applied dose being accounted for in the urine of the 2 animals 2 weeks after treatment. At that time only very low levels of org.-sol. compds. which behaved like 21/199 were present in the tissues, but a considerable residue of unchanged 21/199 was present externally.

L33 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1959:25253 HCAPLUS

DOCUMENT NUMBER: 53:25253

ORIGINAL REFERENCE NO.: 53:4641a-d

TITLE: Toxicity of lindane and other **acaricides** to the eggs of the mange mite Chorioptes bovis

AUTHOR(S): Sweatman, G. K.; Pullin, J. W.

CORPORATE SOURCE: Univ. Otago, Dunedin, N. Z.

SOURCE: Canadian Journal of Comparative Medicine and Veterinary Science (1958), 22, 409-15

CODEN: CNJMAQ; ISSN: 0316-5957

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Mites for in vitro cultures were collected from 2 cows never exposed to any treatment; this precluded any resistance of the mites to an **acaricide**. The isolation unit consisted of a glass column, 5 cm. high, with bolting silk attached to the bottom edge. About 200 eggs were placed on the bolting silk; the **acaricide** to be tested was pipetted over the eggs, and the top of the glass tube was covered with bolting silk. The glass tube was then placed within a rubber tubing held by wire screening to the closely clipped hide of the cow. A total of 39 compds. formulated in accordance with manufacturers' recommendations as wettable powders or **emulsions** was tested. None was 100% lethal to the eggs of C. bovis in 1 exposure; the most effective compds. were (in this order) dieldrin (best), Trithion (or R-1303), Thiodan (or hexachlorethylmethylene bicycloheptene bis(oxymethylene) sulfite), Korlan (or Dow ET-57), and lindane. All active mites of C. bovis were killed by 0.046% of lindane but 16% of the quiescent stages survived 1 exposure. The residual toxicity of lindane on the cow was about 9 days. Hence, a 10-day interval between treatments with lindane is appropriate. Poorest results were given by Bayer 21/199 and the chlorinated hydrocarbons

Dithane Z-78, Murvesco (or PCPBS), and the control. In general, **emulsions** were more effective than wettable powders.

L33 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1958:57770 HCAPLUS  
DOCUMENT NUMBER: 52:57770  
ORIGINAL REFERENCE NO.: 52:10430e-g  
TITLE: Acute toxicities of phosphorus **insecticides**,  
their isomers and intermediary products  
AUTHOR(S): Marhold, Josef; Cizek, Jiri  
CORPORATE SOURCE: Vyzk. ustav org. syntes, Pardubice-Rybitvi, Czech.  
SOURCE: Pracovni Lekarstvi (1957), 9, 390-3  
CODEN: PRLFAG; ISSN: 0032-6291  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB Inhalation tests with male Wistar rats exposed for 4 hrs. to aerosol concns. ranging from 0.10 to 2.20 mg./l. revealed the following relative toxicities: POC13 1.0, PSC13 1.4, MeOPSC12 1.2, EtOPSC12 0.9, (MeO)2PSC1 0.4, (EtO)2PSC1 1.3, (MeO)3PS 0.1, and (EtO)3PS 0.1. Relative oral toxicities detd. by applying the compds. in 0.1% **emulsion** with 0.186% Eryfor RL into the stomach and calcg. from the L.D.50 were as follows: parathion (I) 1.0, paraoxon 2.1, methylparathion 0.9, methylparaoxon 1.6, Potasan 0.4, methylpotasan 0.4, O,O-diethyl S-(p-nitrophenyl) thiophosphate 0.9, O,S-diethyl O-(p-nitrophenyl) thiophosphate 0.3, bisparathion 0.1, O,O-dimethyl S-(p-nitrophenyl) thiophosphate 0.1, bismethylparathion 0.02, and bispotasan 0.002. 4-**Methylumbelliferone** had practically no acute toxicity. L.D.50 of I was 5.387 mg./kg.

L33 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1957:64078 HCAPLUS  
DOCUMENT NUMBER: 51:64078  
ORIGINAL REFERENCE NO.: 51:11647i,11648a-b  
TITLE: **Insecticides**  
INVENTOR(S): Schrader, Gerhard; Kukenthal, Hans  
PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 833270		19520306	DE	

AB O,O-Dialkyl thiophosphoric esters of hydroxycoumarins dissolved or dispersed in suitable solvents or diluents or mixed with inert powd. substances are useful in combating plant pests, moths, bedbugs, Colorado potato beetles, cockroaches, etc. A wool fabric was impregnated with 0.25% of the O,O-dimethyl thiophosphoric ester (I) of 7-hydroxy-4-methylcoumarin in the form of an aq. **emulsion**, and dried in the open air. Moth larvae put on the impregnated fabric were killed within a few hrs. and bedbugs within 72 hrs. Talc. contg. 0.5% of the O,O-diethyl analog (II) of I sprayed on potato plants killed Colorado beetles and their larvae. The O,O-diethyl thiophosphoric ester of 7-hydroxycoumarin, or the O,O-dimethyl or O,O-diethyl thiophosphoric ester of 6-hydroxy-4-methylcoumarin can be used in the place of II.

L33 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1957:10504 HCAPLUS  
DOCUMENT NUMBER: 51:10504  
ORIGINAL REFERENCE NO.: 51:2221c-d  
TITLE: Laboratory comparison of eight organic phosphorus **insecticides** as larvicides against

nonresistant houseflies  
 AUTHOR(S): Lindquist, Donald A.; Fay, R. W.  
 CORPORATE SOURCE: U.S. Dept. of Health, Educ., and Welfare, Atlanta, GA  
 SOURCE: Journal of Economic Entomology (1956), 49, 463-5  
 CODEN: JEENAI; ISSN: 0022-0493  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB The order of decreasing effectiveness as surface applications of xylene **emulsions** to housefly larvae was Diazinon (I), EPN, parathion, Bayer 21/199, NPD, demeton, Bayer L 13/59, malathion. I at 5 mg./sq. ft. gave >90% mortality of small, medium, and large larvae. The compds. were more effective on small and medium-size larvae, and relatively ineffective against pupas.

L33 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1956:92197 HCAPLUS  
 DOCUMENT NUMBER: 50:92197  
 ORIGINAL REFERENCE NO.: 50:17302c-e  
 TITLE: Control of the northern fowl mite and two species of lice on poultry  
 AUTHOR(S): Hoffman, Robert A.  
 SOURCE: Journal of Economic Entomology (1956), 49, 347-9  
 CODEN: JEENAI; ISSN: 0022-0493  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB Northern fowl mite (Bdellonyssus sylviarum) on white Leghorn hens was controlled by dusting with 1% lindane and 5% lauseto neu, Bayer 21/199, Bayer L 13/59 (I), Am. Cyanamid 4124, Chlorthion (II), and malathion (III); DDT was ineffective at 5%. I, II, and III also gave good control as 2.5% dusts. Dusts contg. at least 0.5% III gave complete control of chicken body louse (Menacanthus stramineus) and the shaft louse (Menopon gallinae) on caged birds. III as an **emulsion** spray at 0.25-0.5% gave good control of the fowl mite in field tests. Litter treatments of III dusts for mite control were 80-100% effective initially when 1 lb. of 4% dust was applied to floor areas of 40-200 sq. ft., but its residual effectiveness was erratic. Lindane and III as 1 and 4% dusts, resp., were completely effective against lice when applied at 1 lb./150 sq. ft.; II as a 4% dust was slightly less effective, and DDT gave only partial control at 1 lb./75 sq. ft.

L33 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1956:37781 HCAPLUS  
 DOCUMENT NUMBER: 50:37781  
 ORIGINAL REFERENCE NO.: 50:7377d-e  
 TITLE: Control of potato aphid on tomatoes  
 AUTHOR(S): Taschenberg, E. F.; Avens, A. W.  
 CORPORATE SOURCE: New York State Agr. Expt. Sta., Geneva  
 SOURCE: Journal of Economic Entomology (1955), 48, 685-8  
 CODEN: JEENAI; ISSN: 0022-0493  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB Systox, at the rate of 1 oz./100 gal., was the most effective **aphicide** tested. Parathion, parathion + Bordeaux mixt., malathion, EPN, NPD, and Metacide gave good control of Macrosiphum solanifolii; Potasan was moderately effective. Wettable powders and **emulsifiable** concentrates were tested. The residues of malathion and parathion on green fruit decreased rapidly; after 48 hrs., there was an 87% reduction for malathion and 70% for parathion.

L33 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1956:37769 HCAPLUS  
 DOCUMENT NUMBER: 50:37769  
 ORIGINAL REFERENCE NO.: 50:7375h-i,7376a

TITLE: Larvicides for control of the housefly  
AUTHOR(S): Standifer, L. N.  
CORPORATE SOURCE: Cornell Univ., Ithaca, NY  
SOURCE: Journal of Economic Entomology (1955), 48, 731-3  
CODEN: JEENAI; ISSN: 0022-0493  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB The L.D.50 and L.D.95 (in p.p.m. of rearing media) for various **insecticides** for 3rd instar larvae of the housefly are, resp.; aldrin (23% **emulsion**) 0.90, 3.61; Bayer 21/199 (10% **emulsion**) 4.66, 19.05; Bayer 21/199 (50% WP) 8.38, 46.41; Bayer L 13/59 (10% miscible) 3.39, 15.32; Bayer L 13/59 (tech. WS powder) 2.67, 11.28; BHC (25% **emulsion** from 35% .gamma. isomer) 50.90, 210.40; BHC (30% WP from 6% .gamma. isomer) 121.90, 298.90; dieldrin (18.5% **emulsion**) 1.18, 3.20; Diazinon (25% **emulsion**) 0.98, 5.31; endrin (18.5% **emulsion**) 4.73, 12.49; EPN-300 (25% WP) 0.92, 2.06; lindane (20% **emulsion**) 11.55, 46.16; lindane (2% WP) 14.80, 44.62; malathion (57% **emulsion**) 4.83, 14.11; malathion (25% WP) 8.65, 28.78; and parathion (1% WP) 1.21, 2.27. Chlordan, Dilan, heptachlor, and toxaphene were eliminated in early screening tests because of their low order of toxicity.

L33 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1955:25399 HCAPLUS  
DOCUMENT NUMBER: 49:25399  
ORIGINAL REFERENCE NO.: 49:4925i,4926a-b  
TITLE: The toxicity of phosphoric acid esters to anopheline larvae  
AUTHOR(S): Keller, J. C.; Chapman, H. C.  
SOURCE: Journal of Economic Entomology (1954), 47, 628-30  
CODEN: JEENAI; ISSN: 0022-0493  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
AB cf. C.A. 48, 10986d. Of 274 phosphoric acid esters tested in the lab. against larvae of Anopheles quadrimaculatus only 14 compds. showed sufficient promise to warrant field testing. In the lab. acetone solns. of the toxicants were introduced into distd. water at concns. of 0.1 to 0.0005 p.p.m. of the toxicant. Sulfotepp, parathion, and EPN were very effective and only slightly more effective than methyl parathion. DDT was less toxic than these materials but was at least equal to the other P compds. Malathion, Diazinon, and paraoxon were of intermediate toxicity and Potasan, O,O-diethyl O-piperonyl thiophosphate, and NPD were the least toxic. In field tests against larvae of A. crucians and A. quadrimaculatus the **insecticides** were applied in **emulsions** at dosages from 0.25-0.001 lb./acre. EPN, O-(3-chloro-4-methylumbelliferone) O,O-dimethyl thiophosphate, parathion, and DDT were the most effective materials. Sulfotepp, malathion, and Potasan showed the least promise.

L33 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1950:28490 HCAPLUS  
DOCUMENT NUMBER: 44:28490  
ORIGINAL REFERENCE NO.: 44:5552a-b  
TITLE: Insect **repellent** and sun-protecting cosmetic preparations  
PATENT ASSIGNEE(S): Gebruder Schnyder & Co., A.G.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

CH 257578 19490401 CH

AB Cosmetic preps. are disclosed contg. insect **repellents**, such as esters of dicarboxylic acids, as from 2-ethyl-1,3-hexanediol, 2-phenylcyclohexanol, and 2-cyclohexylcyclohexanol and ultraviolet absorbing chemicals, such as esculin, **umbelliferone**, anthranilic or salicylic acid derivs., etc. Thus, an **emulsion** is made from glyceryl monostearate 5, o-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me 3, C<sub>4</sub>H<sub>8</sub>(CO<sub>2</sub>Et)<sub>2</sub> 10, water 81.5, and perfume and antioxidant 0.5 parts.

=> d stat que

L4 1134 SEA FILE=REGISTRY ABB=ON PLU=ON SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19

L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18

L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR LAURUS OR MOBILIS

L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL

L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?

L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

L34 2283 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L35 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L34 AND L17

L36 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 NOT (L18 OR L22 OR L27 OR L33)

=>  
=>

=> d ibib abs hitrn l36 1-16

L36 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:873739 HCAPLUS

DOCUMENT NUMBER: 140:222848

TITLE: Chemical composition and antifungal activity of the essential oil of Origanum virens on Candida species



AUTHOR(S): Salgueiro, L. R.; Cavaleiro, C.; Pinto, E.; Pina-vaz, C.; Rodrigues, A. G.; Palmeira, A.; Tavares, C.; Costa-de-oliveira, S.; Goncalves, M. J.; Martinez-de-oliveira, J.

CORPORATE SOURCE: Lab. de Farmacognosia, Fac. de Farmacia/CEF, Universidade de Coimbra, Coimbra, Port.

SOURCE: Planta Medica (2003), 69(9), 871-874  
CODEN: PLMEAA; ISSN: 0032-0943

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The compn. and the antifungal activity of the essential oil of **Origanum** virens on Candida species were studied. The essential oil was obtained from the aerial parts of the plant by hydrodistn. and analyzed by GC and GC-MS. The oil was characterized by its high content of **carvacrol** (68.1%) and its biogenetic precursors, .gamma.-terpinene (9.9%) and p-cymene (4.5%). The minimal inhibitory concn. (MIC) and the minimal lethal concn. (MLC) were used to evaluate the antifungal activity against Candida strains (7 clin. isolates and 3 ATCC type strains). The inhibition of germ tube formation and flow cytometry, using the fluorescent probe propidium iodide (PI), were used to evaluate their mechanisms of action. MIC and MLC values were similar for most tested strains, ranging from 0.16 to 0.32 .mu.L/mL. Concns. lower than MIC values strongly prevent germ tube formation. The fungicidal effect is primarily due to an extensive lesion of the membrane.

IT 79-92-5, **Camphene** 87-44-5, trans-**Caryophyllene** 89-83-8, **Thymol** 483-76-1, .delta.-Cadinene 499-75-2, **Carvacrol** 1139-30-6, **Caryophyllene** oxide 3387-41-5, **Sabinene** 6753-98-6, .alpha.-Humulene 13466-78-9 15537-55-0, cis-Sabinene hydrate 29803-81-4, cis-p-Menth-2-en-1-ol 29803-82-5, trans-p-Menth-2-en-1-ol  
RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)

(compn. and antifungal activity of the essential oil of **Origanum** virens on Candida species)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:430292 HCAPLUS

DOCUMENT NUMBER: 139:234990

TITLE: Essential oil composition and antifungal activity of *Foeniculum vulgare* mill. Obtained by different distillation conditions

AUTHOR(S): Mimica-Dukic, N.; Kujundzic, S.; Sokovic, M.; Couladis, M.

CORPORATE SOURCE: Institute of Chemistry, Faculty of Natural Sciences, University of Novi Sad, Novi Sad, 21000, Yugoslavia

SOURCE: Phytotherapy Research (2003), 17(4), 368-371  
CODEN: PHYREH; ISSN: 0951-418X

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The influence of different hydrodistn. conditions was evaluated from the standpoint of essential oil yield, chem. compn. and antifungal activity from seeds of *Foeniculum vulgare* Mill. Three hydrodistn. conditions were considered. The main constituents of the oils were: (E)-anethole (72.27%-74.18%), fenchone (11.32%-16.35%) and Me chavicol (3.78%-5.29%). The method of distn. significantly effected the essential oil yield and quant. compn., although the antifungal activity of the oils against some fungi was only slightly altered.

IT 76-22-2, **Camphor** 1195-79-5, **Fenchone**

4180-23-8, trans-Anethole 25679-28-1, cis-Anethole  
 RL: BSU (Biological study, unclassified); NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (essential oil compn. and antifungal activity of *Foeniculum vulgare*)

IT 79-92-5, Camphene 99-49-0, Carvone  
 123-11-5, p-Anisaldehyde, biological studies 140-67-0,  
 Methyl chavicol 3387-41-5, Sabinene 13466-78-9  
 15537-55-0, Cis-Sabinene hydrate 17699-16-0,  
 Trans-Sabinene hydrate  
 RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (essential oil compn. and antifungal activity of *Foeniculum vulgare*)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:403810 HCAPLUS

DOCUMENT NUMBER: 139:114422

TITLE: In Vitro Antibacterial, Antifungal, and Antioxidant Activities of the Essential Oil and Methanol Extracts of Herbal Parts and Callus Cultures of *Satureja hortensis* L.

AUTHOR(S): Guelluece, M.; Soekmen, M.; Daferera, D.; Agar, G.; Oezkan, H.; Kartal, N.; Polissiou, M.; Soekmen, A.; Sahin, F.

CORPORATE SOURCE: Department of Biology, Faculty of Art and Scienc, Ataturk University, Erzurum, 25240, Turk.

SOURCE: Journal of Agricultural and Food Chemistry (2003), 51(14), 3958-3965  
 CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The present study was designated to evaluate the antimicrobial and antioxidant activities of the essential oil, obtained by using a Clevenger distn. app., water sol. (polar) and water insol. (nonpolar) subfractions of the methanol exts. from aerial parts of *Satureja hortensis* L. plants, and methanol ext. from calli established from the seeds using Gamborg's B5 basal media supplemented with indole-3-butyric acid (1.0 ppm), 6-benzylaminopurine (N6-benzyladenine) (1.0 ppm), and sucrose (2.5%). The antimicrobial test results showed that the essential oil of *S. hortensis* had great potential antimicrobial activities against all 23 bacteria and 15 fungi and yeast species tested. In contrast, the methanol ext. from callus cultures and water sol. subfraction of the methanol ext. did not show antimicrobial activities, but the nonpolar subfraction had antibacterial activity against only five out of 23 bacterial species, which were *Bacillus subtilis*, *Enterococcus fecalis*, *Pseudomonas aeruginosa*, *Salmonella enteritidis*, and *Streptococcus pyogenes*. Antioxidant studies suggested that the polar subfractions of the methanol ext. of intact plant and methanol ext. of callus cultures were able to reduce the stable free radical 2,2-diphenyl-1-picrylhydrazyl to the yellow-colored diphenylpicrylhydrazine. In this assay, the strongest effect was obsd. for the tissue culture ext., with an IC50 value of 23.76  $\pm$  0.80  $\mu$ g/mL, which could be compared with the synthetic antioxidant agent butylated hydroxytoluene. On the other hand, linoleic acid oxidn. was 95% inhibited in the presence of the essential oil while the inhibition was 90% with the chloroform subfraction of the intact plant. The chem. compn. of a hydrodistd. essential oil of *S. hortensis* was analyzed by gas chromatog. (GC)/flame ionization detection (FID) and a GC-mass spectrometry system. A total 22 constituents representing 99.9% of the essential oil were identified by GC-FID anal. Thymol (29.0%),

**carvacrol** (26.5%), **.gamma.-terpinene** (22.6%), and **p-cymene** (9.3%) were the main components.

IT 87-44-5, **Caryophyllene** 89-83-8, **Thymol**  
104-46-1, **Anethole** 499-75-2, **Carvacrol**  
6380-28-5, **Carvacrol** acetate

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(antibacterial, antifungal, and antioxidant activities of essential oil  
and exts. of **Satureja hortensis** callus culture)

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:320834 HCAPLUS

DOCUMENT NUMBER: 139:90030

TITLE: Composition and antibacterial activity of the  
essential oil of **Satureja parnassica** subsp. **parnassica**

AUTHOR(S): Tzakou, Olga; Skaltsa, Helen

CORPORATE SOURCE: Department of Pharmacognosy and Chemistry of Natural  
Products, School of Pharmacy, University of Athens,  
Athens, 15771, Greece

SOURCE: Planta Medica (2003), 69(3), 282-284

CODEN: PLMEAA; ISSN: 0032-0943

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oils of **Satureja parnassica** subsp. **parnassica**  
(samples A and B), were analyzed by means of GC/MS. From the fifty-seven  
identified constituents representing 98.5% and 99.35% of the oils resp.,  
(E)-**caryophyllene**, **carvacrol** and **caryophyllene**  
oxide were the major components of sample A (flowering stage), whereas in  
sample B (vegetative stage) major components were **spathulenol**, **p-cymene**  
and **linalool**. The oils were tested against *Helicobacter pylori* (HP), as  
well as against six aerobically growing bacteria. Both samples showed a  
moderate activity against Gram-pos. bacteria; sample A oil showed greater  
anti-HP activity than sample B.

IT 76-22-2, **Camphor** 79-92-5, **Camphene**  
87-44-5, (E)-**Caryophyllene** 89-83-8, **Thymol**  
106-26-3, **Neral** 118-65-0, **cis-Caryophyllene**  
470-82-6, **1,8-Cineole** 483-76-1,  
**.delta.-Cadinene** 499-75-2, **Carvacrol** 1139-30-6  
, **Caryophyllene** oxide 3792-53-8, **cis-Dihydrocarvone**  
6753-98-6, **.alpha.-Humulene** 10208-80-7,  
**.alpha.-Muurolene** 15537-55-0, **cis-Sabinene hydrate**  
24406-05-1, **.alpha.-Cadinene** 39029-41-9,  
**.gamma.-Cadinene** 244226-09-3, **14-Hydroxy-9-epi-(E)-**  
**caryophyllene**

RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU  
(Occurrence)

(compn. and antibacterial activity of **Satureja parnassica**  
**parnassica** essential oil)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:54400 HCAPLUS

DOCUMENT NUMBER: 138:218127

TITLE: Chemical composition, antibacterial and antifungal  
activities of essential oils from **Satureja calamintha**  
and **Satureja alpina** of Morocco

AUTHOR(S): Satrani, Badr; Farah, Abdellah; Fechtal, Mohamed;  
Talbi, Mohamed; Blaghen, Mohamed; Chaouch, Abdelaziz

CORPORATE SOURCE: Centre National de la Recherche Forestiere, Rabat  
Agdal, 10 050, Morocco

SOURCE: Annales des Falsifications de l'Expertise Chimique et  
Toxicologique (2001), 94(956), 241-250  
CODEN: AFETDF; ISSN: 0242-6110  
PUBLISHER: Societe des Experts-Chimistes de France  
DOCUMENT TYPE: Journal  
LANGUAGE: French

AB The aim of this work is to study the chem. compn. and the antifungal and antibacterial activity of essential oils of **Satureja calamintha** and **Satureja alpina** of Morocco. **Satureja calamintha** samples provide the highest content of essential oil, 1.60% against 1.24% for those of **Satureja alpina**. Essential oils of **Satureja calamintha** are characterized by the presence of p-cymene (20,9%), .gamma.-terpinene (18,7%) and thymol (34,9%) as principal chem. components. Essential oils of **Satureja alpina** are mostly formed by limonene (11.9%), isomenthone (7.3%), neomenthol (6.5%), pulegone (25.1%), **carvone** (18%) and thymol acetate (15.3%). Essential oils of **Satureja calamintha** at given concns. are more active and inhibit all the microorganisms tested. With essential oils of **Satureja alpina**, *Bacillus subtilis* and *Escherichia coli* are inhibited resp. at 1/1000 and 1/500 V/V concns., whereas *Staphylococcus aureus* is not inhibited at .gtoreq. 1/250 V/V concn. In fungi, only *Penicillium parasiticus* revealed certain resistance to inhibition with essential oils of this species until 1/500 V/V concn. *Trametes pini* and *Aspergillus niger* are inhibited at the lowest concn. (1/1000 V/V). The greater activity of essential oils of **Satureja calamintha** compared to that of **Satureja alpina** is due mainly to the presence of thymol, **carvacrol** and .alpha.-terpineol, which are known for their effectiveness against the microbial agents.

IT 79-92-5, Camphene 87-44-5 89-83-8,  
Thymol 97-53-0, Eugenol 99-49-0, **Carvone**  
470-82-6, 1,8 Cineole 489-86-1, Guaiol  
499-75-2, **Carvacrol** 554-61-0 3387-41-5  
, Sabinene 10208-80-7, .alpha. Muurolene 13466-78-9  
15537-55-0

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(chem. compn. and antibacterial and antifungal activities of essential oils from **Satureja calamintha** and *S. alpina* of Morocco)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:720111 HCAPLUS

DOCUMENT NUMBER: 138:3798

TITLE: Effect of Phosphorus Concentration of the Nutrient Solution on the Volatile Constituents of Leaves and Bracts of *Origanum dictamnus*

AUTHOR(S): Economakis, C.; Skaltsa, Helen; Demetzos, Costas; Sokovic, M.; Thanos, Costas A.

CORPORATE SOURCE: Subtropical Plants and Olive Trees Institute, National Agricultural Research Foundation, Chania, Greece

SOURCE: Journal of Agricultural and Food Chemistry (2002), 50(22), 6276-6280

CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The chem. compn. of the essential oils obtained from the leaves and bracts of hydroponically cultivated *O. dictamnus* were analyzed by GC-MS techniques. Three different concns. of phosphorus (5, 30, and 60 mg/L) in the nutrient soln. were used for the cultivation, using the nutrient film technique (NFT). A total of 46 different compds. were identified and significant differences (qual. and quant.) were obsd. between the samples. **Carvacrol** and p-cymene were identified as the main compds. in all samples

analyzed, whereas thymoquinone was found in higher percentage in the leaves than in bracts. The essential oils were tested for their antibacterial activity against Gram-pos. and Gram-neg. bacteria. The oils obtained from the bracts were more active. The results obtained from GC-MS analyses were submitted to chemometric anal.

IT 79-92-5, **Camphene** 87-44-5, .beta.-  
**Caryophyllene** 89-83-8, **Thymol** 483-76-1,  
 .delta.-**Cadinene** 499-75-2, **Carvacrol** 1139-30-6  
 , **Caryophyllene** oxide 3792-53-8, cis-Dihydrocarvone  
 6753-98-6, .alpha.-Humulene 13466-78-9  
 15537-55-0, cis-Sabinene hydrate 17699-16-0,  
 trans-Sabinene hydrate 39029-41-9, .gamma.-**Cadinene**  
 RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical  
 study); BIOL (Biological study)  
 (effect of phosphorus concn. of nutrient soln. on volatile constituents  
 of leaves and bracts of **Origanum dictamnus**)  
 REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:849630 HCAPLUS

DOCUMENT NUMBER: 136:131542

TITLE: Composition and antibacterial activity of the  
 essential oils from *Satureja wiedemanniana* (Lallem.)  
 Velen

AUTHOR(S): Baser, Kemal Husnu Can; Tumen, Gulendam; Tabanca,  
 Nurhayat; Demirci, Fatih

CORPORATE SOURCE: Medicinal and Aromatic Plant and Drug Research Centre  
 (TBAM), Anadolu University, Eskisehir, 26470, Turk.

SOURCE: Zeitschrift fuer Naturforschung, C: Journal of  
 Biosciences (2001), 56(9/10), 731-738  
 CODEN: ZNCBDA; ISSN: 0939-5075

PUBLISHER: Verlag der Zeitschrift fuer Naturforschung

DOCUMENT TYPE: Journal

LANGUAGE: English

AB *Satureja wiedemanniana* (Lallem.) Velen (Lamiaceae) is an endemic  
 species of Turkey. Aerial parts of the plant collected from eleven  
 different localities in Turkey were subjected to hydrodistn. to yield  
 essential oils which were analyzed by a GC/MS system. **Carvacrol**  
 , **thymol**, p-cymene and .gamma.-terpinene were found as the main  
 constituents. Antibacterial evaluation of the oils was also carried out.

IT 76-22-2, **Camphor** 79-92-5, **Camphene**  
 87-44-5, .beta.-**Caryophyllene** 89-83-8, **Thymol**  
 91-20-3, Naphthalene, biological studies 97-53-0,  
 Eugenol 99-49-0, **Carvone** 106-26-3, Neral  
 141-27-5, Geranial 470-82-6, 1,8-Cineole  
 483-76-1, .delta.-**Cadinene** 499-75-2, **Carvacrol**  
 1076-56-8, **Thymol** methyl ether 1139-30-6,  
**Caryophyllene** oxide 1740-97-2, 4-Isopropyl-2-methyl  
 phenol 3387-41-5, Sabinene 3792-53-8 5948-04-9  
 , trans-Dihydrocarvone 6379-73-3, **Carvacrol** methyl  
 ether 6380-28-5, Carvacryl acetate 6753-98-6,  
 .alpha.-Humulene 10208-80-7, .alpha.-Muurolene  
 13466-78-9 15537-55-0, cis-Sabinene hydrate  
 17627-43-9, Isocaryophyllene oxide 17699-16-0,  
 trans-Sabinenehydrate 23445-02-5, Cubebol 29803-81-4,  
 cis-p-Menth-2-en-1-ol 29803-82-5, trans-p-Menth-2-en-1-ol  
 30460-92-5, Pinocarvone 39029-41-9, .gamma.-**Cadinene**  
 90131-02-5, Sesquicineole 92760-25-3, Dehydro-1,8-  
 cineole

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (compn. and antibacterial activity of essential oils from  
*Satureja wiedemanniana*)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:659333 HCAPLUS

DOCUMENT NUMBER: 135:329143

TITLE: Antibacterial screening of *Origanum majorana* oil from Tunisia

AUTHOR(S): Ben Hamida-Ben Ezzeddine, N.; Abdelkefi, M. M.; Ben Aissa, R.; Chaabouni, M. M.

CORPORATE SOURCE: Laboratoire de chimie Structurale Organique, Departement de Chimie, Faculte des Sciences de Tunis, Tunis, 1060, Tunisia

SOURCE: Journal of Essential Oil Research (2001), 13(4), 295-297

CODEN: JEOREG; ISSN: 1041-2905

PUBLISHER: Allured Publishing Corp.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Two methods (agar diffusion and broth microdilution) were used to assess the antibacterial activity of *Origanum majorana* oil of Tunisian origin against 10 bacteria. The results showed that this oil was active against all of the tested strains. The most susceptible were *Escherichia coli*, *Streptococcus A*, *Shigella dysenteria* and *Salmonella enteritidis*. The least susceptible one was *Pseudomonas aeruginosa*.

IT 87-44-5, .beta.-Caryophyllene 89-83-8, Thymol

499-75-2, Carvacrol 1139-30-6,

Caryophyllene oxide 3387-41-5, Sabinene

15537-55-0, cis-Sabinene hydrate 17699-16-0,

trans-Sabinene hydrate 29803-81-4, cis-p-Menth-2-en-1-ol

29803-82-5, trans-p-Menth-2-en-1-ol

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);

BIOL (Biological study); OCCU (Occurrence)

(chem. compn. and antibacterial activity of *Origanum*

*majorana* oil from Tunisia)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:619594 HCAPLUS

DOCUMENT NUMBER: 135:315922

TITLE: Composition and antimicrobial activity of the essential oils of two *Origanum* species

AUTHOR(S): Aligiannis, N.; Kalpoutzakis, E.; Mitaku, Sofia; Chinou, Ioanna B.

CORPORATE SOURCE: Department of Pharmacognosy School of Pharmacy, University of Athens, Athens, 157 71, Greece

SOURCE: Journal of Agricultural and Food Chemistry (2001), 49(9), 4168-4170

CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oils obtained from the aerial parts of *Origanum* *scabrum* and *Origanum microphyllum*, both endemic species in Greece, were analyzed by means of GC and GC-MS. Forty-eight constituents were identified, representing 98.59 and 98.66% of the oils, resp. Carvacrol, terpinen-4-ol, linalool, sabinene, .alpha.-terpinene, and .gamma.-terpinene were found as the major components. Furthermore, both samples exhibited a very interesting antimicrobial profile after they were tested against six Gram-neg. and -pos. bacteria and three pathogenic fungi.

IT 499-75-2, Carvacrol

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(compn. and antimicrobial activity of essential oils of *Origanum scabrum* and *O. microphyllum*)

IT 79-92-5, Camphene 87-44-5, .beta.-  
Caryophyllene 89-83-8, Thymol 140-67-0,  
Estragol 619-62-5, p-Menth-2-en-1-ol 1076-56-8,  
Thymol, methyl ether 1139-30-6, Caryophyllene oxide  
3387-41-5, Sabinene 5948-04-9, trans-Dihydrocarvone  
6379-73-3, Carvacrol, methyl ether 6753-98-6,  
.alpha.-Humulene 13466-78-9 15537-55-0, cis-Sabinene  
hydrate

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)

(compn. and antimicrobial activity of essential oils of *Origanum scabrum* and *O. microphyllum*)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:606435 HCAPLUS

DOCUMENT NUMBER: 135:238040

TITLE: Acaricidal properties of *Artemisia absinthium* and  
*Tanacetum vulgare* (Asteraceae) essential oils obtained  
by three methods of extraction

AUTHOR(S): Chiasson, Helene; Belanger, Andre; Bostanian, Noubar;  
Vincent, Charles; Poliquin, Andre

CORPORATE SOURCE: Urgel Delisle et Associates, Saint-Charlessur-Richelieu,  
QC, J0H 2G0, Can.

SOURCE: Journal of Economic Entomology (2001), 94(1), 167-171  
CODEN: JEENAI; ISSN: 0022-0493

PUBLISHER: Entomological Society of America

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Essential oils of *Artemisia absinthium* L. and *Tanacetum vulgare* L. were  
extd. by three methods, a microwave assisted process (MAP), distn. in  
water (DW) and direct steam distn. (DSD), and tested for their relative  
toxicity as contact **acaricides** to the twospotted spider mite,  
*Tetranychus urticae* Koch. All three exts. of *A. absinthium* and of *T.*  
*vulgare* were lethal to the spider mite but to variable degrees. The LC50  
obtained from the DSD oil of *A. absinthium* was significantly lower (0.04  
mg/cm<sup>2</sup>) than that of the MAP (0.13 mg/cm<sup>2</sup>) and DW (0.13 mg/cm<sup>2</sup>) oil of  
this plant species. DSD and DW exts. of *T. vulgare* were more toxic (75.6  
and 60.4% mite mortality, resp., at 4% concn.) to the spider mite than the  
MAP ext. (16.7% mite mortality at 4% concn.). Chromatog. anal. indicated  
differences in compn. between the more toxic DSD oil of *A. absinthium* and  
the other two exts. of this plant, indicating that a sesquiterpene  
(C<sub>15</sub>H<sub>24</sub>) compd. present in the DSD oil and absent in the other two may  
enhance the toxicity of the DSD oil. Chem. anal. of the *T. vulgare* exts.  
indicated that .beta.-thujone is by far the major compd. of the oil  
(>87.6%) and probably contributes significantly to the acaricidal activity  
of the oil.

IT 76-22-2, Camphor 3387-41-5, Sabinene

RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)

(acaricidal properties of *Artemisia absinthium* and *Tanacetum vulgare* essential oils contg., against twospotted spider mite)

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:548855 HCAPLUS  
 DOCUMENT NUMBER: 136:84933  
 TITLE: Fungitoxic activity of 12 essential oils against four postharvest citrus pathogens: chemical analysis of *Thymus capitatus* oil and its effect in subatmospheric pressure conditions  
 AUTHOR(S): Arras, Giovanni; Usai, Marianna  
 CORPORATE SOURCE: CNR, Istituto per la Fisiologia della Maturazione e della Conservazione del Frutto delle Specie Arboree Mediterranee, Sassari, 48-07100, Italy  
 SOURCE: Journal of Food Protection (2001), 64(7), 1025-1029  
 CODEN: JFPRDR; ISSN: 0362-028X  
 PUBLISHER: International Association for Food Protection  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The fungitoxic activity against *Penicillium digitatum*, *Penicillium italicum*, *Botrytis cinerea*, and *Alternaria citri* of 12 essential oils (EOs) distd. from medicinal plants is reported. The results of the in vitro trials show strong fungitoxic activity of *Thymus capitatus* (L.) Hofmagg EOs, which inhibited the growth of the four fungi at a concn. of 250 ppm (vol/vol). The other 11 essences reduced the development of the fungi from 95 to 9% at 250 ppm (vol/vol). The fungitoxic activity of *T. capitatus* EOs (75, 150, and 250 ppm) on healthy orange fruits, inoculated with *P. digitatum* (108 conidia ml<sup>-1</sup>) by spraying and placed in 10-L desiccators, was weak at atm. pressure (3 to 10% inhibition at all three concns.), while in vacuum conditions (0.5 bar), conidial mortality on the exocarp was high (90 to 97% at all three concns.). These data proved not to be statistically different from treatments with thiabendazole-TBZ (2,000 ppm). Scanning electron microscope observations showed that *T. capitatus* EO vapors altered the morphol. of *P. digitatum* hyphae and conidia. The gas-chromatog. analyses of thyme EO indicated that **carvacrol** was present at 81 to 83%, p-cymene at 4.5 to 5%, .gamma.-terpinene at 2.6 to 3.3%, **caryophyllene** at 1.5 to 1.6%, .beta.-myrcene at 1.6%, and linalool at 1.1 to 1.2%. **Carvacrol** proved to be the most important fungitoxic compd. among the thyme EO constituents, but, unlike thyme EO, it caused alterations to the fruit at the concn. of 75 ppm.

IT **106-26-3**, Neral **17699-16-0**, trans-Sabinene hydrate  
 RL: NPO (Natural product occurrence); BIOL (Biological study); OCCU (Occurrence)  
 (fungitoxic activity of 12 essential oils against four postharvest citrus pathogens)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:504551 HCAPLUS  
 DOCUMENT NUMBER: 133:218812  
 TITLE: Nematicidal activity of essential oils and their components against the root-knot nematode  
 AUTHOR(S): Oka, Yuji; Nacar, Sengul; Putievsky, Eli; Ravid, Uzi; Yaniv, Zohara; Spiegel, Yitzhak  
 CORPORATE SOURCE: Department of Nematology, The Volcani Center, Bet Dagan, 50250, Israel  
 SOURCE: Phytopathology (2000), 90(7), 710-715  
 CODEN: PHYTAJ; ISSN: 0031-949X  
 PUBLISHER: American Phytopathological Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Nematicidal activity of essential oils extd. from 27 spices and arom. plants were evaluated in vitro and in pot expts. Twelve of the 27 essential oils immobilized more than 80% of juveniles of the root-knot nematode *Meloidogyne javanica* at a concn. of 1,000 .mu.L/L. At this



concn., most of these oils also inhibited nematode hatching. Essential oils of *Carum carvi*, **Foeniculum vulgare**, *Mentha rotundifolia*, and *Mentha spicata* showed the highest nematocidal activity among the in vitro tested oils. These oils and those from **Origanum vulgare**, *O. syriacum*, and *Coridothymus capitatus* mixed in sandy soil at concns. of 100 and 200 mg/kg reduced the root galling of cucumber seedlings in pot expts. The main components of these essential oils were tested for their nematocidal activity. **Carvacrol**, *t*-anethole, *thymol*, and (+)-**carvone** immobilized the juveniles and inhibited hatching at >125 .mu.L/L in vitro. Most of these components mixed in sandy soil at concns. of 75 and 150 mg/kg reduced root galling of cucumber seedlings. In 3-L pot expts., nematocidal activity of the essential oils and their components was confirmed at 200 and 150 mg/kg, resp.

IT 106-26-3, Neral 141-27-5, Geranial 4180-23-8,

trans-Anethole

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(nematocidal activity of essential oils and their components against *Meloidogyne javanica*)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:454193 HCAPLUS

DOCUMENT NUMBER: 111:54193

TITLE: The essential oils of *Tanacetum vulgare* L. and *Tanacetum parthenium* (L.) Schultz-Bip

AUTHOR(S): De Pooter, H. L.; Vermeesch, J.; Schamp, N. M.

CORPORATE SOURCE: Fac. Agric. Sci., State Univ. Ghent, Ghent, B-9000, Belg.

SOURCE: Journal of Essential Oil Research (1989), 1(1), 9-13  
CODEN: JEOREG; ISSN: 1041-2905

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The volatile fraction of *T. parthenium* is characterized by a high **camphor** (44%) and trans-chrysanthenyl acetate (23%) content. *T. vulgare* oils, obtained from specimens growing in the province of Eastern Flanders (Belgium), conformed to the infra-specific chem. variability; three chem. types were identified: i.e., the .beta.-thujone, trans-chrysanthenyl acetate and **camphor**/.beta.-thujone types. A *T. vulgare* had a mosquito-repellent activity. However, the activity was much lower than that of diethyltoluamide contg. com. prepn.

IT 483-76-1, .delta.-Cadinene 3387-41-5, Sabinene

RL: BIOL (Biological study)

(of *Tanacetum* species essential oil)

IT 470-82-6, 1,8-Cineole

RL: BIOL (Biological study)

(of *Tanacetum vulgare* essential oil, mosquito-repellent activity in relation to)

L36 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:109868 HCAPLUS

DOCUMENT NUMBER: 102:109868

TITLE: Components of oil of tansy (*Tanacetum vulgare*) that **repel** Colorado potato beetles (*Leptinotarsa decemlineata*)

AUTHOR(S): Schearer, W. R.

CORPORATE SOURCE: Dep. Chem., Lehigh Univ., Bethlehem, PA, 18015, USA

SOURCE: Journal of Natural Products (1984), 47(6), 964-9  
CODEN: JNPRDF; ISSN: 0163-3864

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The steam distillate of fresh leaves and flowers of tansy, *T. vulgare*, was strongly **repellent** to Colorado potato beetles, *L. decemlineata*. Liq. chromatog. (GC) detected 56 compds. Identification of compds. was by GC-mass spectrometry. The major components, **camphor** (30%) and umbellulone (25%), show the plant to be a previously unreported chemotype. A com. oil of tansy was also found to be highly **repellent** to Colorado potato beetles; GC-mass spectroscopic anal. found bornyl acetate (74%) to be the major component. To det. the active compds. of the oils, bioassays were run using Colorado potato beetles as detectors for GC and TLC. To det. the relative strengths of **repellency**, an olfactometer was constructed using potato beetles as detectors. The strongest **repellents** found were 1,8-**cineole**, bornyl acetate, p-cymene, .gamma.-terpinene, and **camphor**.

IT 3387-41-5

RL: BIOL (Biological study)  
(of tansy oil)

L36 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1968:33131 HCAPLUS

DOCUMENT NUMBER: 68:33131

TITLE: Essential oil of *Foeniculum vulgare*. II. Changes in different fennel oils before and after harvesting

AUTHOR(S): Toth, Laszlo

CORPORATE SOURCE: Tech. Hochsch., Karlsruhe, Fed. Rep. Ger.

SOURCE: Planta Medica (1967), 15(4), 371-89

CODEN: PLMEAA; ISSN: 0032-0943

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The essential oils of the aerial parts of various varieties and strains of *F. vulgare* were studied at various stages of ontogenesis. The compn. of the oils of herb and fruit is principally detd. by genetic factors. However, the amt. of oil in the fruit is much affected by climate and time and conditions of storage of the crude drug material. Essential oil content was highest in the green fruit (*F. vulgare* var *vulgare*) (8.6%) and decreased with ripening (6.2%). This was also noted in extra-fruit parts; thus the umbel rays (without buds, flowers, or fruits) at time of flowering had 1.6% oil, at time of fruiting 0.9%. The "primary oil" of various parts of the plant (flowers, buds, young leaves, stems, roots) showed similar compn., with changes during maturation of the plant. Thus, with *F. vulgare* var *vulgare*, on ripening of fruit, there was a sharp decrease in terpene hydrocarbons (.alpha.-pinene, .alpha.-phellandrene, limonene) but an increase of these compds. in older leaves and stems. The reverse occurred for fenchone, estragol, and anethole, which increased with ripening in the fruits and decreased in later development of stems and leaves. With *F. vulgare* var *dulce*, a strong increase of limonene and decrease of anethole in the older plant parts was noted, .alpha.-pinene and .alpha.-phellandrene remaining about the same. Indian and Chinese essential oil constituents behaved much as in *F. vulgare* var *dulce*, except for an increase in fenchone in fruit and herb oils and the appearance of 2 new unidentified compds., also found in southern Italian varieties and in tubers of *F. vulgare* var *azoricum* in which the oil resembles that of young leaves of Indian fennel. In Argentine oil, young fruits contained 21% estragol, which dropped to 10% on ripening, with increase in anethole; a similar relation was found in *F. vulgare* var *vulgare*, wild Spanish, and Czechoslovak fennels. Climate had small effect on compn. but was important to percent yields. Cool rainy weather cut the yield by 25%. In the first 10 months of storage, anethole and estragol decreased; in 2 years, there was a loss of essential oil in the fruit, going from 6.2% to 4.45%. The essential oil in storage, even at 4.degree., showed a rapid decrease in anethole with a relative increase of fenchone, estragol, and p-cymol. The oil is O-sensitive due to the high content of anethole; hence air should be excluded; light and heat are not important causes of

deterioration. Distinction of var vulgare and var dulce is possible by gas chromatog. (GC), which is better than thin-layer (TLC), in which distinctions are possibly only in fenchone. For TLC, best distinction of spots comes with the use of KMnO<sub>4</sub>-concd. H<sub>2</sub>SO<sub>4</sub> reagent followed by vanillin-H<sub>2</sub>SO<sub>4</sub>. Indian, Chinese, and Japanese oils are not distinguishable from var vulgare; var dulce is readily distinguished both by GC and TLC. TLC is also satisfactory for detecting the autoxidn. products of anethole: anisaldehyde, p-methoxyacetophenone, and 3 other unidentified compds. Anethole and estragol could not be sepd. by TLC; only in the completely oxidized oil did estragol appear in place of anethole (same R<sub>f</sub> position). A TLC biotest was made, using *Drosophila melanogaster* as test animal. In the ladder-chamber system of TLC, lethal spots appeared at 2 places corresponding to dieldrin and aldrin. These **insecticides** persist as residues a long time in the essential oil following field use of the **insecticides**. Anethole is toxic to *Drosophila*, but not estragol or the anethole decompn. products.. Two large groups of herb oils can be distinguished which may be used to distinguish strains of the species, viz., phellandrene (*F. vulgare* var vulgare, Japanese, Argentine, wild Spanish) and limonene (*F. vulgare* var dulce, *F. vulgare* var azoricum, Indian, Chinese) plants. It is believed that oil formation is assocd. with protein synthesis. 24 references.

IT 140-67-0 1195-79-5 4180-23-8

RL: BIOL (Biological study)

(of **Foeniculum vulgare**, ontogenesis in relation to)

L36 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1954:37206 HCAPLUS

DOCUMENT NUMBER: 48:37206

ORIGINAL REFERENCE NO.: 48:6655f-i,6656a

TITLE: Volatile oils. V

AUTHOR(S): Fester, Gustavo A.; Martinuzzi, Enzo A.; Ricciardi, Armando I.

SOURCE: Rev. fac. ing. quim. (Santa Fe, Arg.) (1953), Volume Date 1952-1953, 20, 21-22,43-84

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. C.A. 46, 11586i. *Lippia turbinata* (poleo) tea is used as a stimulant and diuretic. The principal volatile substance is d-limonene, with a trace of **cineole**. The cinnamon-sandalwood odor that develops in storage was traced to lippione (I), an 8-hydroxy-p-menthadien-2-one not previously described, found in the fraction b. 80-102.degree. and pptd. as the thiosemicarbazone, m. 181.5.degree., and as the phenylsemicarbazone, m. .+-133.degree.. Hydrolysis of its semicarbazone always produces lippia-phenol (II) (8-hydroxycarvacrol). I is sol. in org. solvents, reduces Fehling soln. and ammoniacal Ag, and is transformed to II by FeCl<sub>3</sub> with production of a blackish violet color. It forms only one oxime. The structures of I and II have been accepted, except for the positions of the double bonds. *Aloysia ligustrina* (palo amarillo, usillo) contains l-pinene, eucalyptol, a sesquiterpene, vanillin, and isovaleric acid contg. compds. *Acantholippia trifida* (tomillo) contains citronellol, thymol, and palmitic and isovaleric acid contg. compds. *A. seriphioides* is used as a stomachic and contains thymol. *A. hastulata* (rica-rica) tea is used as a stomachic and contains thujone, d-isothujone, and thujyl alc. *Minthostachys verticillata* is the source of the newly discovered peperinic acid (I) (2,2-dihydroxy-.alpha.,4-dimethyl-.DELTA.1,.alpha.-cyclohexaneacetic acid .gamma.-lactone), m. 189.degree., that seps. from the oil on standing 2 years in the cold, and is, therefore, found in liqueurs, confections, perfumes, **insecticides**, and crema de peperina made from the plant. **Satureja** odora (mu.acte.na-mu.acte.na, salvialora) contains pulegone, d-isomenthone, lippione, and cedrole. *S. parvifolia* is used as an aphrodisiac and contains dl-piperitone and an unidentified diosphenol. *Chersodoma argentina* (salvia de la puna) contains a trace of an oil with the odor of

isovaleric acid and what was assumed to be an alc. sesquiterpene with a piperaceous odor. *Chenopodium multifidum* (paico hembra) yields an oil that is 44-58% ascaridole, with some cymene, limonene, **camphor**, anethole, and .beta.-phellandrene. Low yields of some of the compds. were attributed to unsatisfactory harvest labor, and to shipping and storage conditions.

- IT 121-33-5, Vanillin  
(in *Aloysia ligustrina* oil)
- IT 104-46-1, Anethole  
(in *Chenopodium multifidum* oil)
- IT 490-03-9, Diosphenol  
(in **Satureja** *parvifolia* oil)

=> d stat que

L1 841 SEA FILE=REGISTRY ABB=ON PLU=ON FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN

L2 4221 SEA FILE=REGISTRY ABB=ON PLU=ON LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE

L3 9219 SEA FILE=REGISTRY ABB=ON PLU=ON ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L4 1134 SEA FILE=REGISTRY ABB=ON PLU=ON SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L5 2386 SEA FILE=REGISTRY ABB=ON PLU=ON (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W) ACETATE

L6 56 SEA FILE=REGISTRY ABB=ON PLU=ON METHOXYPHENYLACETONE OR CARYOPHYLLENE

L7 28510 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN

L8 184111 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE

L9 132750 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L10 54434 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 OR SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L11 57324 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 OR (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W) ACETATE

L12 9259 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR METHOXYPHENYLACETONE OR CARYOPHYLLENE

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) (REPEL? INSECTICIDE?  
OR APHCIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L) (LABIATAE OR UMBELLIFER  
A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR  
PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS  
OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM  
OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19

L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18

L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR  
LAURUS OR MOBILIS

L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL

L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE?  
OR APHCIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?

L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE  
? OR APHCIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11  
OR L12) (L) (REPEL? OR INSECTICIDE? OR APHCIDE? OR ACARICIDE?  
OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR  
PESTICIDE? OR TERMITICIDE?)

L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR  
L33)

=>  
=>

=> d ibib abs hitrn l41 1-29

L41 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:322144 HCAPLUS

TITLE: Acaricidal Activity of Constituents Identified in

**Foeniculum vulgare** Fruit Oil against  
Dermatophagoides spp. (Acari: Pyroglyphidae)

AUTHOR(S): Lee, Hoi-Seon

CORPORATE SOURCE: Faculty of Biotechnology and Research Center for  
Industrial Development of Biofood Materials, Chonbuk  
National University, Jeonju, 561-756, S. Korea

SOURCE: Journal of Agricultural and Food Chemistry ACS ASAP  
CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Acaricidal activities of components derived from **Foeniculum  
vulgare** fruit oil against *Dermatophagoides farinae* and

Dermatophagoides pteronyssinus were examd. using direct contact application and compared with that of the com. **repellent** benzyl benzoate. The major biol. active constituent of **Foeniculum** fruit oil was characterized as (+)-**fenchone** by spectroscopic analyses. On the basis of LD50 values, the compd. most toxic to D. Farinae was p-**anisaldehyde** (11.3 mg/m2) followed by (+)-**fenchone** (38.9 mg/m2), (-)-**fenchone** (41.8 mg/m2), benzyl benzoate (89.2 mg/m2), **thymol** (90.3 mg/m2), and estragol (413.3 mg/m2). Against D. Pteronyssinus, p-**anisaldehyde** (10.1 mg/m2) was much more effective than benzyl benzoate (67.5 mg/m2), **thymol** (68.5 mg/m2), and estragol (389.9 mg/m2). These results indicate that the acaricidal activity of F. **Vulgare** fruit oil likely results from (+)-**fenchone** and p-**anisaldehyde**. (+)-**Fenchone** was 20.3 times more abundant in the oil than p-**anisaldehyde**. (+)-**Fenchone** and p-**anisaldehyde** merit further study as potential house dust mite control agents or as lead compds.

L41 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:294265 HCAPLUS  
 TITLE: p-anisaldehyde: acaricidal component of Pimpinella  
**anisum** seed oil against the house dust mites  
 Dermatophagoides farinae and Dermatophagoides  
 pteronyssinus  
 AUTHOR(S): Lee, Hoi-Seon  
 CORPORATE SOURCE: Research Center for Industrial Development of Biofood  
 Materials and Institute of Agricultural Science &  
 Technology, College of Agriculture, Chonbuk National  
 University, Jeonju, 561-756, S. Korea  
 SOURCE: Planta Medica (2004), 70(3), 279-281  
 CODEN: PLMEAA; ISSN: 0032-0943  
 PUBLISHER: Georg Thieme Verlag  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The acaricidal activity of anise seed oil-derived p-**anisaldehyde** and com. available components of anise seed oil was examd. against Dermatophagoides farinae and D. pteronyssinus and compared with those of the synthetic **acaricides**, benzyl benzoate and N,N-diethyl-m-toluamide (DEET). On the basis of LD50 values, the compd. most toxic to D. farinae adults was p-**anisaldehyde** (1.11 .mu.g/cm2) followed by benzyl benzoate (9.32 .mu.g/cm2), DEET (36.84 .mu.g/cm2), 3-carene (42.10 .mu.g/cm2), and estragol (43.23 .mu.g/cm2). Against D. pteronyssinus adults, p-**anisaldehyde** (0.98 .mu.g/cm2) was much more effective than benzyl benzoate (6.54 .mu.g/cm2), DEET (17.79 .mu.g/cm2), 3-carene (39.84 .mu.g/cm2), and estragol (40.11 .mu.g/cm2). P-**Anisaldehyde** was about 8.4 and 6.7 times more toxic than benzyl benzoate against D. farinae and D. pteronyssinus adults, resp. The results suggested that p-**anisaldehyde** may be useful as a lead compd. for the development of new agents for the selective control of house dust mites.

L41 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:725102 HCAPLUS  
 DOCUMENT NUMBER: 139:347962  
 TITLE: Antimycotic activity of Melaleuca alternifolia  
 essential oil and its major components  
 AUTHOR(S): Oliva, B.; Piccirilli, E.; Ceddia, T.; Pontieri, E.;  
 Aureli, P.; Ferrini, A. M.  
 CORPORATE SOURCE: Department of Experimental Medicine, Section of  
 Microbiology, University of L'Aquila, L'Aquila, 67100,  
 Italy  
 SOURCE: Letters in Applied Microbiology (2003), 37(2), 185-187  
 CODEN: LAMIE7; ISSN: 0266-8254  
 PUBLISHER: Blackwell Publishing Ltd.

DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The aim of this study was to analyze the antimycotic properties of Melaleuca alternifolia essential oil (tea tree oil, TTO) and its principal components and to compare them with the activity of 5-fluorocytosine and amphotericin B. The screening for the antimycotic activity was performed by serial 2 fold dilns. in Roswell Park Memorial Institute medium with the inclusion of Tween-80 (0.cntdot.5%). TTO and terpinen-4-ol were the most active compds. The majority of the organisms were sensitive to the essential oil, with TTO and terpinen-4-ol being the most active oils showing antifungal activity at min. inhibitory concn. values lower than other drugs. This study provides a sample large enough to det. the antifungal properties of TTO and terpinen-4-ol and suggests further studies for a possible therapeutic use.

IT 99-85-4, .gamma.-Terpinene 99-86-5, .alpha.-Terpinene 562-74-3, Terpinen-4-ol 586-62-9, Terpinolene

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antimycotic activity of Melaleuca alternifolia essential oil and its major components compared with **fungicides**)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:306766 HCAPLUS

DOCUMENT NUMBER: 139:2333

TITLE: Effect of presowing seed treatment and fungicide application on the yield of marjoram (**Origanum majorana** L.) grown by setting-out transplants in the open field

AUTHOR(S): Capecka, E.; Dabrowska, B.; Suchorska-Tropilo, K.; Szalacha, E.; Wiewiora, B.

CORPORATE SOURCE: Dept. of Vegetable Crops, Agric. Univ. in Krakow, Krakow, 31-425, Pol.

SOURCE: Acta Horticulturae (2003), 598, 259-264  
CODEN: AHORA2; ISSN: 0567-7572

PUBLISHER: International Society for Horticultural Science

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Marjoram seeds were soaked in Gibrescol soln. (GA3), matricconditioned with MicroCel-E (MCE), and osmoconditioned in polyethylene glycol soln. (PEG). The treated seeds and control ones were either dressed with fungicide or sown without it. In order to investigate the effect of the applied treatments on the marjoram herbyield, content and compn. of essential oil and oil yield, field expts. were conducted in two regions of Poland (Warsaw and Krakow). Transplants were grown in the greenhouse. Each tested method of presowing treatment increased the seed vigor and the highest improvement was noted with MCE and followed by PEG and GA3, resp. Fungicide application did not cause pos. effects. That was also confirmed with the results of field expts. where fungicide applying either showed no significant differences (Krakow) or even decreased the yield of marjoram herb and oil (Warsaw). The advantageous effect of presowing seed conditioning and treating with GA3 on the marjoram yield was obsd. in both exptl. locations, even though its degree was different. Tested methods of seed treatment did not change marjoram oil compn. considerably.

IT 78-70-6 80-56-8, .alpha.-Pinene  
87-44-5, .beta.-Caryophyllene 89-83-8,  
Thymol 98-55-5, .alpha.-Terpineol  
99-85-4, .gamma.-Terpinene 99-86-5, .alpha.-  
Terpinene 105-87-3, Geranyl acetate  
106-24-1, Geraniol 115-95-7, Linalyl  
acetate 123-35-3, .beta.-Myrcene



127-91-3, .beta.-Pinene 138-86-3,  
 Limonene 507-70-0, Borneol 562-74-3  
 2867-05-2, .alpha.-Thujene 3387-41-5,  
 Sabinene 6753-98-6, .alpha.-Humulene 17699-16-0  
 , trans-Sabinene hydrate

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (effect of presowing seed treatment and fungicides on  
 marjoram oil compn. and yield)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:153701 HCAPLUS

DOCUMENT NUMBER: 138:234682

TITLE: Antifungal activity of the essential oil of *Agastache rugosa* Kuntze and its synergism with ketoconazole

AUTHOR(S): Shin, S.; Kang, C.-A.

CORPORATE SOURCE: College of Pharmacy, Duksung Women's University,  
 Seoul, 132-714, S. Korea

SOURCE: Letters in Applied Microbiology (2003), 36(2), 111-115  
 CODEN: LAMIE7; ISSN: 0266-8254

PUBLISHER: Blackwell Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To evaluate the fungitoxic activity of the essential oil of *Agastache rugosa* alone and to det. its combination effect with ketoconazole against *Blastoschizomyces capitatus*. The antifungal activities of the essential oil of *A. rugosa* and its main constituent estragole were investigated using the broth microdilution, disk diffusion methods, and checkerboard microtiter assay. Both estragole and the essential oil exhibited strong activities against the tested fungi and showed synergism with ketoconazole against *B. capitatus*. Both estragole and the essential oil of *A. rugosa* have significant growth-inhibiting activities against *B. capitatus* showing strong synergistic effect with ketoconazole. The essential oil of *A. rugosa*, combined with ketoconazole, may be particularly useful against *B. capitatus*, a rare pathogenic fungus documented to cause severe and fatal mycoses in immunocompromised patients.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:791480 HCAPLUS

DOCUMENT NUMBER: 137:381235

TITLE: Repellent activity of constituents identified in  
***Foeniculum vulgare*** fruit against

*Aedes aegypti* (Diptera: Culicidae)

AUTHOR(S): Kim, Do-Hyoung; Kim, Soon-Il; Chang, Kyu-Sik; Ahn,  
 Young-Joon

CORPORATE SOURCE: School of Agricultural Biotechnology, Seoul National  
 University, Suwon, 441-744, S. Korea

SOURCE: Journal of Agricultural and Food Chemistry (2002),  
 50(24), 6993-6996  
 CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The repellent activity of materials derived from the methanol ext. of fruits from ***Foeniculum vulgare*** against hungry *Aedes aegypti* females was examd. using skin and patch tests and compared with that of the com. N,N-diethyl-m-toluamide (deet) and (Z)-9-octadecenoic acid. The biol. active constituents of the ***Foeniculum*** fruits were characterized as (+)-fenchone and

(E)-9-octadecenoic acid by spectroscopic analyses. Responses varied according to compd., dose, and exposure time. In a skin test with female mosquitoes, at a dose of 0.4 mg/cm<sup>2</sup>, (+)-**fenchone** and (Z)-9-octadecenoic acid exhibited moderate **repellent** activity at 30 min after treatment, whereas deet provided >1 h of protection against adult mosquitoes at 0.2 mg/cm<sup>2</sup>. (Z)-9-Octadecenoic acid was a more potent **repellent** agent than (E)-9-octadecenoic acid. (+)-**Fenchone** and (E)-9-octadecenoic acid merit further study as potential mosquito **repellent** agents or as lead compds.

IT 4695-62-9, (+)-**Fenchone**

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(**repellent** activity of **Foeniculum vulgare** fruit constituents against *Aedes aegypti*)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:404848 HCAPLUS

DOCUMENT NUMBER: 137:243389

TITLE: Influence of plant volatiles on feeding damage caused by the onion thrips *Thrips tabaci*

AUTHOR(S): Koschier, Elisabeth H.; Sedy, Katrin A.; Novak, Johannes

CORPORATE SOURCE: Institute for Plant Protection, University of Agricultural Sciences (BOKU) Vienna, Vienna, 1190, Austria

SOURCE: Crop Protection (2002), 21(5), 419-425  
CODEN: CRPTD6; ISSN: 0261-2194

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Leaf disk bioassays were conducted to det. the effects of essential oils and their volatile constituents from plant species (Lamiaceae family) at three concns. ranging from 0.01% to 1% on the feeding activity of adult female onion thrips (*Thrips tabaci* Lindeman; Thysanoptera: Thripidae). The percentage of feeding damage area on leek (*Allium porrum* L.) leaf disks and the adult survival was assessed after 24 h. Onion thrips were significantly deterred by the essential oils of marjoram (**Origanum majorana** L.), lavender (*Lavandula angustifolia* L.) and mint (*Mentha arvensis* L.) at several concns., and by the oil of rosemary (*Rosmarinus officinalis* L.) at 1% concn. Furthermore, thrips feeding damage was reduced as a result of **linalool** and **eugenol** application at three concns. Adult survival on the leaf disk surface was significantly decreased by application of terpinen-4-ol at 1% concn. Evaluation of the potential of biol. active plant volatiles against *T. tabaci* may provide a new approach to the development of antifeedants and/or natural **insecticides** for use in both biol. and integrated pest management strategies.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:325416 HCAPLUS

DOCUMENT NUMBER: 137:42944

TITLE: Insecticidal properties of essential plant oils against the mosquito *Culex pipiens molestus* (Diptera: Culicidae)

AUTHOR(S): Traboulsi, Abdallah F.; Taoubi, K.; El-Haj, Samih; Bessiere, J. M.; Rammal, Salma

CORPORATE SOURCE: Faculty of Agricultural Sciences, Lebanese University, Beirut, Lebanon

SOURCE: Pest Management Science (2002), 58(5), 491-495

CODEN: PMSCF; ISSN: 1526-498X

PUBLISHER: John Wiley &amp; Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The insecticidal activities of essential oil exts. from leaves and flowers of arom. plants against fourth-instar larvae of the mosquito *Culex pipiens molestus* Forskal were detd. Exts. of *Myrtus communis* were found to be the most toxic, followed by those of *Origanum syriacum*, *Mentha microphylla* Koch, *Pistacia lentiscus* and *Lavandula stoechas* with LC50 values of 16, 36, 39, 70 and 89 mg L-1, resp. Over 20 major components were identified in exts. from each plant species. Eight pure components (1,8-cineole, menthone, linalool, terpineol, carvacrol, thymol, (1S)-(-)-.alpha.-pinene and (1R)-(+)-.alpha.-pinene) were tested against the larvae. Thymol, carvacrol, (1R)-(+)-.alpha.-pinene and (1S)-(-)-.alpha.-pinene were the most toxic (LC50 = 36-49 mg L-1), while menthone, 1,8-cineole, linalool and terpineol (LC50 = 156-194 mg L-1) were less toxic.

IT 76-49-3P, Bornyl acetate 78-70-6P,  
Linalool 80-26-2P, .alpha.-Terpinyl acetate  
89-80-5P, Menthone 89-82-7P, Pulegone  
89-83-8P, Thymol 98-55-5P, .alpha.-  
Terpineol 99-86-5P, .alpha.-Terpinene  
105-87-3P, Geranyl acetate 123-35-3P  
, Myrcene 499-75-2P, Carvacrol 515-00-4P,  
Myrtenol 586-62-9P 1195-79-5P, Fenchone  
7785-26-4P, (1S)-(-)-.alpha.-Pinene 7785-70-8P  
, (1R)-(+)-.alpha.-Pinene

RL: BUU (Biological use, unclassified); PUR (Purification or recovery);

BIOL (Biological study); PREP (Preparation); USES (Uses)

(essential oils and their components as **insecticides** against  
*Culex pipiens molestus*)

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

I41 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:31208 HCAPLUS

DOCUMENT NUMBER: 136:90675

TITLE: An insect repellent isolated from *Foeniculum  
vulgare* fruit

INVENTOR(S): Ahn, Young-Joon; Kim, Young-Soo; Kim, Do-Hyoung; Kim,  
Soon-Il

PATENT ASSIGNEE(S): Naturobiotech Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002002065	A1	20020110	WO 2000-KR1097	20001002
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1296637	A1	20030402	EP 2000-966566	20001002
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,			

IE, SI, LT, LV, FI, RO, MK, CY, AL

JP 2004501945 T2 20040122 JP 2002-506687 20001002

PRIORITY APPLN. INFO.: KR 2000-38336 A 20000705

WO 2000-KR1097 W 20001002

AB The present invention relates to an insect **repellent** isolated from *F. vulgare* fruit, and more particularly, to an insect **repellent** comprising one or more compds. selected from the group consisting of fennel oil which is isolated from *F. vulgare* fruit, (+)-**fenchone** and E-9-octadecenoic acid. The fennel oil, (+)-**fenchone** and E-9-octadecenoic acid of the present invention are provided as insect **repellent** components due to their lack of toxicity to people. (+)-**Fenchone** had a perfect **repellent** activity, the same as DEET, and the E-9-octadecenoic acid had an 80.4% **repellency**.

IT 4695-62-9P, (+)-**Fenchone**

RL: BUU (Biological use, unclassified); PUR (Purification or recovery);

BIOL (Biological study); PREP (Preparation); USES (Uses)

(insect **repellents** isolated from *Foeniculum vulgare* fruit)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:31186 HCAPLUS

DOCUMENT NUMBER: 136:81326

TITLE: Insecticidal compositions comprising fennel extract and/or its components

INVENTOR(S): Kim, Do-Hyoung; Chang, Kyu-Sik; Ahn, Young-Joon; Kim, Young-Soo; Park, Byeong-Mook; Kim, Hyun-Cheol; Kim, Soon-Il

PATENT ASSIGNEE(S): Naturobiotech Co., Ltd., S. Korea

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002001959	A1	20020110	WO 2001-KR620	20010414
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

AU 2001052713 A5 20020114 AU 2001-52713 20010414

PRIORITY APPLN. INFO.: KR 2000-38337 A 20000705

KR 2001-14802 A 20010322

WO 2001-KR620 W 20010414

AB The present invention relates to **pesticide** compn., and more particularly, to **pesticide** compn. comprising fennel ext. or at least one compd. selected from a group consisting of **estragole**, **fenchone** and **anethole** isolated from fennel seed. Fennel ext., **estragole**, **fenchone** and **anethole** in the present invention have insecticidal activity against insect in stored product, and **anethole** has insecticidal activity against sanitary insect pests. Compds. isolated from fennel seed in the present invention are harmless and can be used as **insecticide**.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:398667 HCAPLUS

DOCUMENT NUMBER: 135:163600

TITLE: Effect of volatile oil constituents of *Mentha* species against the stored grain pests, *Callosobruchus maculatus* and *Tribolium castaneum*

AUTHOR(S): Tripathi, Arun Kumar; Prajapati, Veena; Aggarwal, Kishan Kumar; Kumar, Sushil

CORPORATE SOURCE: Bioprospection Group, Genetic Resources and Biotechnology Division, Central Institute of Medicinal and Aromatic Plants, Lucknow, 226 015, India

SOURCE: Journal of Medicinal and Aromatic Plant Sciences (2000), 22(1B), 549-556  
CODEN: JMASF6

PUBLISHER: Central Institute of Medicinal and Aromatic Plants

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Essential oils of *Mentha arvensis*, *M. citrata*, *M. piperita* and *M. spicata* and their fractions rich in **menthone**, **menthol**, **linalool**, **linalyl acetate**, **menthofuran**, **limonene** and **l-carvone** were tested for their fumigant toxicity against flour beetle (*Tribolium castaneum*) and pulse beetle (*Callosobruchus maculatus*) and **repellent**, contact toxicity and development inhibition against adults, larvae and pupae of *T. castaneum*, resp. Fumigation of all the aroma chems. was more effective against *C. maculatus* than *T. castaneum*. Liq. **menthol** was the most effective fumigant. Other effective fumigants included *M. arvensis* and *M. piperita* oils, **menthone**, **linalyl acetate** and **menthofuran**. **L-carvone** proved to be moderately effective fumigant on both *C. maculatus* and *T. castaneum*. The essential oils of *M. arvensis*, *M. citrata*, *M. piperita* and *M. spicata* possessed **repellent** activity against *T. castaneum* adults. Topical application of **menthofuran** was most effective against larvae of *T. castaneum*. *M. spicata* was proved to be the most effective larvicidal essential oil. **L-carvone** was obsd. to be the most effective adulticidal agent. *M. arvensis* and *M. spicata* essential oils possessed highly effective adulticidal activity. *M. arvensis* and *M. spicata* oils and their monoterpene constituents **menthone**, **menthol**, **l-carvone** have been identified as potent anti-insect agents for grain protection.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:166880 HCAPLUS

DOCUMENT NUMBER: 134:233048

TITLE: Contact and fumigant activities of constituents of **Foeniculum vulgare** fruit against three coleopteran stored-product insects

AUTHOR(S): Kim, Do-Hyoung; Ahn, Young-Joon

CORPORATE SOURCE: School of Agricultural Biotechnology, Seoul National University, Suwon, 441-744, S. Korea

SOURCE: Pest Management Science (2001), 57(3), 301-306  
CODEN: PMSFCF; ISSN: 1526-498X

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The insecticidal activities of materials derived from the fruit of fennel, **Foeniculum vulgare**, against adults of *Sitophilus oryzae*, *Callosobruchus chinensis* and *Lasioderma serricorne* were examd. using

direct contact application and fumigation methods. The biol. active constituents of the *Foeniculum* fruits were characterized as the phenylpropenes (E)-anethole and estragole, and the monoterpene (+)-fenchone, by spectroscopic anal. Responses varied with insect species, compd., dose and exposure time. In a filter paper diffusion test, estragole at 0.168mg cm<sup>-2</sup> caused 91% mortality to *S. oryzae* adults within 1 day after treatment (DAT), whereas (+)-fenchone and (E)-anethole gave over 90% mortality at 2 and 4 DAT, resp. Against *C. chinensis* adults, all test compds. revealed potent insecticidal activities at 0.021mgcm<sup>-2</sup> at 2 DAT. Against *L. serricorne* adults at 0.105mgcm<sup>-2</sup>, (E)-anethole gave 100% mortality at 1 DAT, whereas 90 and 60% mortality at 4 DAT was achieved with estragole and (+)-fenchone, resp. In a fumigation test, the test compds. were much more effective against adults of *S. oryzae*, *C. chinensis* and *L. serricorne* in closed cups than in open ones, indicating that the insecticidal activity of test compds. was largely attributable to fumigant action. As naturally occurring insect-control agents, the *F. vulgare* fruit-derived materials described could be useful for managing field populations of *S. oryzae*, *C. chinensis* and *L. serricorne*.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:78286 HCAPLUS  
DOCUMENT NUMBER: 134:136668  
TITLE: Extraction of bioactive materials from plants  
INVENTOR(S): Pisacane, Anthony  
PATENT ASSIGNEE(S): UK  
SOURCE: PCT Int. Appl., 25 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001007135	A2	20010201	WO 2000-GB2870	20000727
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
GB 2352396	A1	20010131	GB 1999-17504	19990727
GB 2352397	A1	20010131	GB 1999-17505	19990727
PRIORITY APPLN. INFO.:			GB 1999-17504	A 19990727
			GB 1999-17505	A 19990727
			GB 1999-19724	A 19990820

AB Method are described for extg. materials, particularly bioactive materials with insecticidal, bactericidal and/or insect **repellent** properties from plants such as Chrysanthemum or Helianthus, by solvent extn. using plant-derived solvents such as terpenes, e.g., **terpineol** and other plant oils. Thus, flowers of *Leucanthemum vulgare* were gathered at full bloom and mixed with **terpineol** and the mixt. was ground. Within a few minutes, the color of the **terpineol** became yellow as a result of the extn. of the material from the flowers.

L41 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:260562 HCAPLUS  
 DOCUMENT NUMBER: 132:305869  
 TITLE: Genes for enzymes of monoterpene biosynthesis and their use in the development of insect-resistant plants  
 INVENTOR(S): Meyer, Terry Euclaire; Yalpani, Nasser  
 PATENT ASSIGNEE(S): Pioneer Hi-Bred International, Inc., USA  
 SOURCE: PCT Int. Appl., 82 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000022150	A2	20000420	WO 1999-US23180	19991005
WO 2000022150	A3	20001005		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6291745	B1	20010918	US 1998-172339	19981014
AU 9962900	A1	20000501	AU 1999-62900	19991005
PRIORITY APPLN. INFO.:			US 1998-172339	A1 19981014
			US 1993-42199	B3 19930402
			US 1993-153544	B2 19931116
			US 1995-449061	B2 19950524
			WO 1999-US23180	W 19991005

AB Methods for manipulating metabolic pathway in plants, particularly those pathways involved in the biosynthesis of monoterpenes are provided. Methods are directed at transforming plants with one or more nucleotide sequences encoding the enzyme GPP synthase, and the monoterpene synthases **limonene**-, carveol and S-linalool synthase. Methods for creating or enhancing resistance to insects in plants by transforming plants with GPP- and/or monoterpene synthases, to generate plants producing monoterpenes in amt. effective for resistance to insects are also provided. **Limonene** was found to be an effective antifeedant and **insecticide** for larvae of southern corn rootworm and European corn borer. The prepn. of transgenic corn expressing a cloned **limonene** synthase gene is described.

L41 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:122572 HCAPLUS  
 DOCUMENT NUMBER: 132:232995  
 TITLE: Botanical biocides 4. Mosquitocidal activity of certain Thymus **capitatus** constituents  
 AUTHOR(S): Mansour, S. A.; Messeha, S. S.; El-Gengaihi, S. E.  
 CORPORATE SOURCE: Pesticide Chemistry Department, National Research Centre, Cairo, Egypt  
 SOURCE: Journal of Natural Toxins (2000), 9(1), 49-62  
 CODEN: JNTOER; ISSN: 1058-8108  
 PUBLISHER: Alaken  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Successive extn. of thyme, Thymus **capitatus** (L.) Hoffm. and Link (Lamiaceae), by different solvents of increasing polarity, showed that potency was highly attributed to the nonpolar fraction (e.g., petroleum

ether) when tests were carried out against the larvae and adults of *Culex pipiens* (L). Mosquitocidal activity was high in the volatile oil, unsaponifiable portion, and certain compds. isolated from the unsaponifiable portion (e.g., **thymol**,  $\alpha$ -amyrin, carvacrol +  $\beta$ -**caryophyllene**). The volatile oil, **thymol**, and the unsaponifiable portion had high larvicidal potency (LC50 = 49.0, 58.0, and 100.0 ppm, resp.). Nonlethal concns. of these substances synergized the toxicity of malathion, and induced additive or antagonistic effects when mixed with permethrin or pirimiphos-Me. The unsaponifiable portion and volatile oil showed the highest adulticidal potency (LC50 = 0.0070 and 0.0076 mg/cm<sup>2</sup>, resp.). The efficacy of the tested candidates as **repellent** agents was in the order: unsaponifiable portion >  $\alpha$ -amyrin > **thymol** > volatile oil > carvacrol +  $\beta$ -**caryophyllene**. **Thymol** as well as the volatile oil affected egg hatchability, causing Sterility Indexes of 0.70 and 0.74, resp., while the unsaponifiable portion caused lower degree of sterility (0.81).

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:447916 HCAPLUS

DOCUMENT NUMBER: 129:187062

TITLE: Essential-oil-mediated interactions between oregano plants and Helicidae grazers

AUTHOR(S): Vokou, D.; Tziolas, M.; Bailey, S. E. R.

CORPORATE SOURCE: Dep. Ecology, School Biology, Aristotle Univ., Thessaloniki, 54 006, Greece

SOURCE: Journal of Chemical Ecology (1998), 24(7), 1187-1202  
CODEN: JCECD8; ISSN: 0098-0331

PUBLISHER: Plenum Publishing Corp.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Arom. plants dominate in Mediterranean-type ecosystems. They often produce remarkable quantities of essential oils contg. high amts. of phenolic isoprenoids, such as **thymol** and carvacrol. The purpose of this work was to examine the interactions between commonly occurring arom. plants in the Mediterranean environment and their snail grazers. The arom. plants used were two *Origanum vulgare* subspecies, subsp. *hirtum* and subsp. *vulgare*. They differ in the content and the qual. compn. of their essential oil; subsp. *hirtum* contains a much larger amt. and is rich in phenolic compds. Their effect on the foraging behavior of three snail species, native in Greece, was studied; the snail species were *Helix lucorum*, *H. aspersa*, and *Eobania vermiculata*. The snails' responses to different food sources, raw or processed, with or without essential oils, were evaluated during the different stages of the foraging cycle. During the encounter stage, snails were more **repelled** than attracted when close to phenol-rich foods. During the acceptance stage, all snail species tended to reject food types that contained high concns. of subsp. *hirtum* essential oil. At the feeding stage, subsp. *hirtum* essential oil caused redn. of daily consumption rates. Overall, the essential oil of *O. vulgare* subsp. *vulgare* did not produce any marked change in the snails' behavior. In contrast, that of *O. vulgare* subsp. *hirtum* had a **repellent** effect, particularly when present in naturally occurring high concns. Among the snail species, *H. lucorum*, which does not share the same biotope with *O. vulgare* subsp. *hirtum*, was the least tolerant to its essential oil.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:208778 HCAPLUS



DOCUMENT NUMBER: 128:305149  
 TITLE: Repellents for control of Dermatophagoides  
 INVENTOR(S): Kusuki, Hirofumi; Fujii, Masashi  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10087409	A2	19980407	JP 1996-279823	19960913
PRIORITY APPLN. INFO.:			JP 1996-279823	19960913

AB The repellents contain .gtoreq.1 compd. selected from 89 compd. classes including essential oils, glycerides, plant exts., and esters (compds. of the 89 classes are described in the claim) and are applied at 0.01-100 wt.% to household utensils, cosmetics, quasi-drugs, and topical prepsns. Tetrahydrolinalool showed repellent effects against Dermatophagoides pteronyssinus and D. farinae with a min. effective concn. of 1.0 wt.%.

IT **76-49-3, Bornyl acetate 78-69-3,**  
 Tetrahydrolinalool **107-41-5,** Hexylene glycol **115-99-1,**  
 Linalyl formate **128-51-8,** Nopyl acetate **491-07-6,**  
 Isomenthone **562-74-3,** 1-Terpinen-4-ol **1335-94-0,** Irone **62395-45-3**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (**repellents** for control of Dermatophagoides)

L41 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:172884 HCAPLUS  
 DOCUMENT NUMBER: 128:189480  
 TITLE: Insecticidal and genotoxic activities of oregano essential oils  
 AUTHOR(S): Karpouhtsis, Ioannis; Pardali, Evagelia; Feggou, Efi; Kokkini, Stella; Scouras, Zacharias G.; Mavragani-Tsipidou, Penelope  
 CORPORATE SOURCE: Department of Genetics Development and Molecular Biology and Laboratory of Systematic Botany and Phytogeography School of Biology, Faculty of Science Aristotle University of Thessaloniki, Thessaloniki, GR-54006, Greece  
 SOURCE: Journal of Agricultural and Food Chemistry (1998), 46(3), 1111-1115  
 CODEN: JAFCAU; ISSN: 0021-8561  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The essential oils (EOs) obtained from the oregano plants **Origanum vulgare** subsp. **hirtum**, **Coridothymus capitatus**, and **Satureja thymbra** were examd. by a combination of GC and GC-MS and found to be rich in carvacrol, **thymol**, .gamma.-**terpinene**, and p-cymene. These EOs and their main constituents, carvacrol and **thymol**, were tested for insecticidal and genotoxic activities on Drosophila. The EO of **S. thymbra** was found to be the most effective as an **insecticide**, while carvacrol was found to be more toxic than **thymol**. The toxicities of carvacrol and **thymol** do not correspond to their participation in the EOs, and mixts. of these two phenols in levels resembling their content in the three oils showed that the toxicity of carvacrol was reduced in the

presence of **thymol**, thus suggesting antagonistic phenomena. The somatic mutation and recombination test on *Drosophila* revealed that, among the compds. studied, only **thymol** exhibits genotoxic activity.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:403106 HCAPLUS

DOCUMENT NUMBER: 127:62000

TITLE: Insecticidal and genotoxic activities of mint essential oils

AUTHOR(S): Franzios, Gerasimos; Mirotsou, Maria; Hatzia Apostolou, Emmanouel; Kral, Jiri; Scouras, Zacharias G.; Mavragani-Tsipidou, Penelope

CORPORATE SOURCE: Department of Genetics Development and Molecular Biology School of Biology Faculty of Science, Aristotle University of Thessaloniki (AUTH), Thessaloniki, GR-54006, Greece

SOURCE: Journal of Agricultural and Food Chemistry (1997), 45(7), 2690-2694  
CODEN: JAFCAU; ISSN: 0021-8561

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The essential oils (EOs) extd. from the mint species *Mentha pulegium* and *Mentha spicata*, together with their main constituents, **pulegone**, **menthone**, and carvone, were tested for insecticidal and genotoxic activities on *Drosophila melanogaster*. The EOs of both arom. plants showed strong insecticidal activity, while only the oil of *M. spicata* exhibited a mutagenic one. Among the constituents studied, the most effective **insecticide** was found to be **pulegone**, while the most effective for genotoxic activity was shown by **menthone**. Both toxic and genotoxic activities of the EOs of the two studied mint plants are not in accordance with those of their main constituents, **pulegone**, **menthone**, and carvone. **Pulegone** is significantly more effective (9 times) as an **insecticide**, while **menthone** and carvone are less effective (6 and 2 times, resp.) **insecticides** when used in their authentic forms, and a mixt. of authentic **pulegone** and **menthone**, in levels resembling their content in the oil of *M. pulegium*, showed that the strong toxicity of **pulegone** is suppressed in the presence of **menthone**. All the above suggest that synergistic/antagonistic phenomena may be involved that alter the toxicity of the whole EO.

L41 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:624745 HCAPLUS

DOCUMENT NUMBER: 123:196976

TITLE: Screening for antioxidant activity of essential oils obtained from spices

AUTHOR(S): Lagouri, V.; Boskou, D.

CORPORATE SOURCE: Faculty Chemistry, Aristotle University Thessaloniki, Thessaloniki, GR-54006, Greece

SOURCE: Developments in Food Science (1995), 37A, 869-79  
CODEN: DFSCDX; ISSN: 0167-4501

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Recent research has concd. on natural sources of antioxidants such as plant exts., herbs, spices, seeds and fermn. products. The presence of active components in spices has been demonstrated over the last 30 yr. Exts. obtained by food grade solvents were mainly examd. for nonvolatile phenolic constituents, while less attention was given to the essential oil fraction and the extent to which this fraction may contribute to the

antioxidant effect of the spice. In this paper, various essential oils were screened for their antioxidant activity by measuring bleaching of beta-carotene in the coupled oxidn. of beta-carotene and linoleic acid. The choice of the plants studied was based on two criteria: a. The plant is known for antioxidant activity. B. There is evidence from the literature that the essential oil contains compds. with a phenolic ring and an electron **repelling** group. Oils contg. carvacrol, **thymol** and **eugenol** showed marked antioxidant activity coeffs. Oils from plants of oregano species protected purified lard stored at 35.degree.C. The inhibition of oxidn. exhibited was highly carvacrol + **thymol** content dependent.

L41 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:454193 HCAPLUS

DOCUMENT NUMBER: 111:54193

TITLE: The essential oils of *Tanacetum vulgare* L.

and *Tanacetum parthenium* (L.) Schultz-Bip

AUTHOR(S): De Pooter, H. L.; Vermeesch, J.; Schamp, N. M.

CORPORATE SOURCE: Fac. Agric. Sci., State Univ. Ghent, Ghent, B-9000, Belg.

SOURCE: Journal of Essential Oil Research (1989), 1(1), 9-13  
CODEN: JEOREG; ISSN: 1041-2905

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The volatile fraction of *T. parthenium* is characterized by a high camphor (44%) and trans-chrysanthenyl acetate (23%) content. *T. vulgare* oils, obtained from specimens growing in the province of Eastern Flanders (Belgium), conformed to the infra-specific chem. variability; three chem. types were identified: i.e., the .beta.-thujone, trans-chrysanthenyl acetate and camphor/.beta.-thujone types. A *T. vulgare* had a mosquito-repellent activity. However, the activity was much lower than that of diethyltoluamide contg. com. prepn.

IT 98-55-5, .alpha.-Terpineol 99-86-5, .alpha.-

Terpinene 123-35-3, Myrcene 515-00-4

, Myrtenol 564-94-3 586-62-9, Terpinolene

RL: BIOL (Biological study)

(of *Tanacetum vulgare* essential oil, mosquito-repellent activity in relation to)

L41 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1989:211265 HCAPLUS

DOCUMENT NUMBER: 110:211265

TITLE: Insect **repellent** property of essential oils of *Foeniculum vulgare*, *Pimpinella anisum* and *anethole*

AUTHOR(S): Shukla, H. S.; Upadhyay, P. D.; Tripathi, S. C.

CORPORATE SOURCE: Dep. Bot., Univ. Gorakhpur, Gorakhpur, 273 009, India

SOURCE: Pesticides (1989), 23(1), 33-5

CODEN: PSTDAN; ISSN: 0031-6148

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The insect **repellent** property of the volatile constituents of *F. vulgare*, *P. anisum* and *anethole* was studied using *Tribolium castaneum* as the test insect. A Y-tube olfactometer was used for the study. *Anethole* had the highest **repellent** action and *F. vulgare* showed minimal activity.

IT 104-46-1, *Anethole*

RL: BIOL (Biological study)

(as insect **repellent** for *Tribolium castaneum*)

L41 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:109868 HCAPLUS

DOCUMENT NUMBER: 102:109868

TITLE: Components of oil of tansy (*Tanacetum vulgare*) that repel Colorado potato beetles (*Leptinotarsa decemlineata*)  
 AUTHOR(S): Schearer, W. R.  
 CORPORATE SOURCE: Dep. Chem., Lehigh Univ., Bethlehem, PA, 18015, USA  
 SOURCE: Journal of Natural Products (1984), 47(6), 964-9  
 CODEN: JNPRDF; ISSN: 0163-3864

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The steam distillate of fresh leaves and flowers of tansy, *T. vulgare*, was strongly **repellent** to Colorado potato beetles, *L. decemlineata*. Liq. chromatog. (GC) detected 56 compds. Identification of compds. was by GC-mass spectrometry. The major components, camphor (30%) and umbellulone (25%), show the plant to be a previously unreported chemotype. A com. oil of tansy was also found to be highly **repellent** to Colorado potato beetles; GC-mass spectroscopic anal. found **bornyl acetate** (74%) to be the major component. To det. the active compds. of the oils, bioassays were run using Colorado potato beetles as detectors for GC and TLC. To det. the relative strengths of **repellency**, an olfactometer was constructed using potato beetles as detectors. The strongest **repellents** found were 1,8-cineole, **bornyl acetate**, p-cymene, .gamma.-**terpinene**, and camphor.  
 IT 76-49-3 80-56-8 89-83-8 99-85-4  
 RL: BIOL (Biological study)  
 (of tansy oil, Colorado potato beetle **repellency** by)

L41 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1984:567515 HCAPLUS  
 DOCUMENT NUMBER: 101:167515  
 TITLE: Response of Colorado potato beetles, *Leptinotarsa decemlineata* (Say), to volatile components of tansy, *Tanacetum vulgare*  
 AUTHOR(S): Panasiuk, Oksana  
 CORPORATE SOURCE: East. Reg. Res. Cent., Agric. Res. Serv., Philadelphia, PA, 19118, USA  
 SOURCE: Journal of Chemical Ecology (1984), 10(9), 1325-33  
 CODEN: JCECD8; ISSN: 0098-0331  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The responses of Colorado potato beetle, *L. decemlineata*, to volatile components of tansy, *T. vulgare*, were investigated in order to establish a chem. basis for obsd. redn. in beetle populations when potatoes, *Solanum tuberosum*, were interplanted with tansy. Colorado potato beetles exhibited avoidance behavior to tansy oil, volatiles from intact tansy plants, a "hydrocarbon fraction" of tansy oil, obtained by fractionation on alumina, and five of the 13 known components of tansy oil that were tested. One constituent of tansy oil, .alpha.-pinene [80-56-8], attracted beetles.

L41 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1982:522030 HCAPLUS  
 DOCUMENT NUMBER: 97:122030  
 TITLE: Cockroach repellents contained in Japanese mint and Scotch spearmint  
 AUTHOR(S): Inazuka, Shinichi  
 CORPORATE SOURCE: Kawasaki Fact., Ajinomoto Co., Kawasaki, 220, Japan  
 SOURCE: Nippon Noyaku Gakkaishi (1982), 7(2), 145-54  
 CODEN: NNGADV; ISSN: 0385-1559  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB Three olfactory **repellents** toward *Blattella germanica* and *Periplaneta fuliginosa* were isolated from oil of Japanese mint (*Mentha*

arvensis piperascens) and identified as (-)-**limonene** [5989-54-8], (-)-**menthol** [2216-51-5], and (-)-**menthone** [14073-97-3]. Two others were isolated from oil of Scotch spearmint (*Mentha spicata* tenuis) and identified as (-)-carvone [6485-40-1] and (-)-**pulegone** [3391-90-0]. Their enantiomers and racemic compds. had very low activities. Relations between **repellency** and the steric configuration of Me, iso-Pr, and isopropenyl groups on the cyclohexane or cyclohexene ring were suggested.

IT 2216-51-5 5989-54-8 14073-97-3

RL: BIOL (Biological study)  
(of Japanese mint oil, as cockroach **repellent**)

IT 3391-90-0

RL: BIOL (Biological study)  
(of Scotch spearmint oil, as cockroach **repellent**)

L41 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1973:119942 HCAPLUS

DOCUMENT NUMBER: 78:119942

TITLE: Preliminary studies on the effect of soil application of chlorinated insecticides on the amino acid makeup of wheat (*Triticum vulgare*)

AUTHOR(S): Thakre, D. S. K.; Saksena, S. N.

CORPORATE SOURCE: Dep. Soil Sci. Agric. Chem., Coll. Agric., Udaipur, India

SOURCE: Mysore Journal of Agricultural Sciences (1972), 6(4), 466-70

CODEN: MJASAD; ISSN: 0047-8539

DOCUMENT TYPE: Journal

LANGUAGE: English

AB P-p'-DDT (I) [50-29-3], aldrin (II) [309-00-2], endrin [72-20-8], and lindane (III) [58-89-9] (10-30 ppm) stimulated lysine [56-87-1], methionine [63-68-3], and tyrosine [60-18-4] synthesis in wheat. Leucine [61-90-5] synthesis was stimulated by I, II, and III only. The content of glutamic acid [56-86-0] plus aspartic acid [56-84-8], glycine [56-40-6] plus serine [56-45-1], and valine [72-18-4] in wheat decreased as a result of these **insecticides**.

IT 61-90-5, biological studies

RL: FORM (Formation, nonpreparative)  
(formation of, by wheat, chlorine-contg. **insecticides** effect on)

L41 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1968:33131 HCAPLUS

DOCUMENT NUMBER: 68:33131

TITLE: Essential oil of *Foeniculum vulgare*

. II. Changes in different fennel oils before and after harvesting

AUTHOR(S): Toth, Laszlo

CORPORATE SOURCE: Tech. Hochsch., Karlsruhe, Fed. Rep. Ger.

SOURCE: Planta Medica (1967), 15(4), 371-89

CODEN: PLMEAA; ISSN: 0032-0943

DOCUMENT TYPE: Journal

LANGUAGE: German

AB The essential oils of the aerial parts of various varieties and strains of *F. vulgare* were studied at various stages of ontogenesis. The compn. of the oils of herb and fruit is principally detd. by genetic factors. However, the amt. of oil in the fruit is much affected by climate and time and conditions of storage of the crude drug material. Essential oil content was highest in the green fruit (*F. vulgare* var **vulgare**) (8.6%) and decreased with ripening (6.2%). This was also noted in extra-fruit parts; thus the umbel rays (without buds, flowers, or fruits) at time of flowering had 1.6% oil, at time of fruiting

0.9%. The "primary oil" of various parts of the plant (flowers, buds, young leaves, stems, roots) showed similar compn., with changes during maturation of the plant. Thus, with *F. vulgare* var *vulgare*, on ripening of fruit, there was a sharp decrease in terpene hydrocarbons (.alpha.-pinene, .alpha.-phellandrene, limonene) but an increase of these compds. in older leaves and stems. The reverse occurred for *fenchone*, estragol, and *anethole*, which increased with ripening in the fruits and decreased in later development of stems and leaves. With *F. vulgare* var dulce, a strong increase of *limonene* and decrease of *anethole* in the older plant parts was noted, .alpha.-pinene and .alpha.-phellandrene remaining about the same. Indian and Chinese essential oil constituents behaved much as in *F. vulgare* var dulce, except for an increase in *fenchone* in fruit and herb oils and the appearance of 2 new unidentified compds., also found in southern Italian varieties and in tubers of *F. vulgare* var azoricum in which the oil resembles that of young leaves of Indian fennel. In Argentine oil, young fruits contained 21% estragol, which dropped to 10% on ripening, with increase in *anethole*; a similar relation was found in *F. vulgare* var *vulgare*, wild Spanish, and Czechoslovak fennels. Climate had small effect on compn. but was important to percent yields. Cool rainy weather cut the yield by 25%. In the first 10 months of storage, *anethole* and estragol decreased; in 2 years, there was a loss of essential oil in the fruit, going from 6.2% to 4.45%. The essential oil in storage, even at 4.degree., showed a rapid decrease in *anethole* with a relative increase of *fenchone*, estragol, and p-cymol. The oil is O-sensitive due to the high content of *anethole*; hence air should be excluded; light and heat are not important causes of deterioration. Distinction of var *vulgare* and var dulce is possible by gas chromatog. (GC), which is better than thin-layer (TLC), in which distinctions are possibly only in *fenchone*. For TLC, best distinction of spots comes with the use of KMnO4-concd. H2SO4 reagent followed by vanillin-H2SO4. Indian, Chinese, and Japanese oils are not distinguishable from var *vulgare*; var dulce is readily distinguished both by GC and TLC. TLC is also satisfactory for detecting the autoxidn. products of *anethole*: anisaldehyde, p-methoxyacetophenone, and 3 other unidentified compds. *Anethole* and estragol could not be sepd. by TLC; only in the completely oxidized oil did estragol appear in place of *anethole* (same Rf position). A TLC biotest was made, using *Drosophila melanogaster* as test animal. In the ladder-chamber system of TLC, lethal spots appeared at 2 places corresponding to dieldrin and aldrin. These insecticides persist as residues a long time in the essential oil following field use of the insecticides. *Anethole* is toxic to *Drosophila*, but not estragol or the *anethole* decompn. products. Two large groups of herb oils can be distinguished which may be used to distinguish strains of the species, viz., *phellandrene* (*F. vulgare* var *vulgare*, Japanese, Argentine, wild Spanish) and *limonene* (*F. vulgare* var dulce, *F. vulgare* var azoricum, Indian, Chinese) plants. It is believed that oil formation is assocd. with protein synthesis. 24 references.

L41 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN .

ACCESSION NUMBER: 1954:37206 HCAPLUS

DOCUMENT NUMBER: 48:37206

ORIGINAL REFERENCE NO.: 48:6655f-i,6656a

TITLE: Volatile oils. V

AUTHOR(S): Fester, Gustavo A.; Martinuzzi, Enzo A.; Ricciardi, Armando I.

SOURCE: Rev. fac. ing. quim. (Santa Fe, Arg.) (1953), Volume Date 1952-1953, 20, 21-22,43-84

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. C.A. 46, 11586i. *Lippia turbinata* (poleo) tea is used as a stimulant and diuretic. The principal volatile substance is **d-limonene**, with a trace of cineole. The cinnamon-sandalwood odor that develops in storage was traced to lippione (I), an 8-hydroxy-p-menthadien-2-one not previously described, found in the fraction b. 80-102.degree. and pptd. as the thiosemicarbazone, m. 181.5.degree., and as the phenylsemicarbazone, m. .+-.133.degree.. Hydrolysis of its semicarbazone always produces lippiaphenol (II) (8-hydroxycarvacrol). I is sol. in org. solvents, reduces Fehling soln. and ammoniacal Ag, and is transformed to II by FeCl<sub>3</sub> with production of a blackish violet color. It forms only one oxime. The structures of I and II have been accepted, except for the positions of the double bonds. *Aloysia ligustrina* (palo amarillo, usillo) contains **l-pinene**, eucalyptol, a sesquiterpene, vanillin, and isovaleric acid contg. compds. *Acantholippia trifida* (tomillo) contains citronellol, **thymol**, and palmitic and isovaleric acid contg. compds. *A. seriphoides* is used as a stomachic and contains **thymol**. *A. hastulata* (rica-rica) tea is used as a stomachic and contains thujone, d-isothujone, and thujyl alc. *Minthostachys verticillata* is the source of the newly discovered peperinic acid (I) (2,2-dihydroxy-.alpha.,4-dimethyl-.DELTA.1,.alpha.-cyclohexaneacetic acid .gamma.-lactone), m. 189.degree., that seps. from the oil on standing 2 years in the cold, and is, therefore, found in liqueurs, confections, perfumes, **insecticides**, and crema de peperina made from the plant. *Satureja* odora (mu.acte.na-mu.acte.na, salvialora) contains **pulegone**, d-isomenthone, lippione, and cedrole. *S. parvifolia* is used as an aphrodisiac and contains dl-piperitone and an unidentified diosphenol. *Chersodoma argentina* (salvia de la puna) contains a trace of an oil with the odor of isovaleric acid and what was assumed to be an alc. sesquiterpene with a piperaceous odor. *Chenopodium multifidum* (paico-hembra) yields an oil that is 44-58% ascaridole, with some cymene, **limonene**, camphor, **anethole**, and .beta.-**phellandrene**. Low yields of some of the compds. were attributed to unsatisfactory harvest labor, and to shipping and storage conditions.

L41 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1933:11201 HCAPLUS  
 DOCUMENT NUMBER: 27:11201  
 ORIGINAL REFERENCE NO.: 27:1097h-i  
 TITLE: Disinfectant  
 INVENTOR(S): Tabar-Nouval, Joseph M. L.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 733563		19320316	FR	

AB A disinfectant and **insecticide** contains deodorized petroleum or white spirit 100 l., **thymol** 200 g., camphor 150 g., pyrethrum oil 400 cc., citronella oil 400 cc., oil of thyme 70 cc., oil of mimosa 210 cc., and oil of **origanum** 100 cc.

=> d stat que 145

L1 841 SEA FILE=REGISTRY ABB=ON PLU=ON FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN

L2 4221 SEA FILE=REGISTRY ABB=ON PLU=ON LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE

L3 9219 SEA FILE=REGISTRY ABB=ON PLU=ON ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L4 1134 SEA FILE=REGISTRY ABB=ON PLU=ON SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L5 2386 SEA FILE=REGISTRY ABB=ON PLU=ON (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THMYL)(W) ACETATE

L6 56 SEA FILE=REGISTRY ABB=ON PLU=ON METHOXYPHENYLACETONE OR CARYOPHYLLENE

L7 28510 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN

L8 184111 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE

L9 132750 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L10 54434 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 OR SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L11 57324 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 OR (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THMYL)(W) ACETATE

L12 9259 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR METHOXYPHENYLACETONE OR CARYOPHYLLENE

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)



L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L) (LABIATAE OR UMBELLIFER  
A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS  
OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM  
OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19

L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18

L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR  
LAURUS OR MOBILIS

L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL

L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?

L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE  
? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11  
OR L12) (L) (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE?  
OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR  
PESTICIDE? OR TERMITICIDE?)

L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR  
L33)

L42 9172 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11  
OR L12) AND (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE?  
OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR  
PESTICIDE? OR TERMITICIDE?)

L43 130 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L44 48 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 NOT (L18 OR L22 OR L27 OR  
L33 OR L41)

L45 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L44 AND PD=<OCTOBER 10, 1998

=> d ibib abs hitrn l45 1-5

L45 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:556639 HCAPLUS

DOCUMENT NUMBER: 129:299226

TITLE: Insecticidal activity of essential oils on Aedes  
aegypti larvae

AUTHOR(S): Chantraine, Jean-Marie; Laurent, Dominique; Ballivian,  
Carolt; Saavedra, Gloria; Ibanez, Ruben; Vilaseca, L.

CORPORATE SOURCE: Antonio  
 SOURCE: ORSTOM, Cochabamba, Bolivia  
 Phytotherapy Research (1998), 12(5), 350-354  
 CODEN: PHYREH; ISSN: 0951-418X  
 PUBLISHER: John Wiley & Sons Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The insecticidal activity of essential oils from 52 Bolivian plant species  
 has been evaluated on *Aedes aegypti* larvae. The active components of  
 essential oils showing an interesting larvicidal effect have been studied.  
 The monoterpenes E-anethol and E-nerolidol were found to be the active  
 principles of the most toxic essential oils. The lethal concns. (LC50 and  
 LC95) of some essential oils, E-anethol, E-nerolidol and a ref.  
**insecticide** (Temephos) are given.  
 IT 78-70-6, Linalool 80-56-8, .alpha.-  
 Pinene 89-82-7, Pulegone 98-55-5,  
 .alpha.-Terpineol 123-35-3, .beta.-Myrcene  
 138-86-3, Limonene 562-74-3, Terpinen-4-ol  
 4180-23-8, (E)-Anethol 40716-66-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); BUU (Biological use, unclassified); BIOL (Biological  
 study); USES (Uses)  
 (insecticidal activity of components from essential oils on *Aedes*  
*aegypti* larvae)  
 REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1998:256649 HCAPLUS  
 DOCUMENT NUMBER: 129:13468  
 TITLE: Insecticidal and Genotoxic Activities of Oregano  
 Essential Oils. [Erratum to document cited in  
 CA128:189480]  
 AUTHOR(S): Karpouthis, Ioannis; Pardali, Evagelia; Feggou, Efi;  
 Kokkini, Stella; Scouras, Zacharias G.;  
 Mavrgani-Tsipidou, Penelope  
 CORPORATE SOURCE: Department of Genetics Development and Molecular  
 Biology and Laboratory of Systematic Botany and  
 Phytogeography School of Biology, Faculty of Science  
 Aristotle University of Thessaloniki, Thessaloniki,  
 GR-54006, Greece  
 SOURCE: Journal of Agricultural and Food Chemistry (  
 1998), 46(4), 1694  
 CODEN: JAFCAU; ISSN: 0021-8561  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The genetic constitution of the flare strain (under Materials and Methods,  
 Genetic System) should read y wco/y wco.  
 IT 89-83-8, Thymol 99-85-4, .gamma.-  
 Terpinene 499-75-2, Carvacrol  
 RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence);  
 BSU (Biological study, unclassified); BUU (Biological use, unclassified);  
 BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
 (insecticidal and genotoxic component of oregano essential oils  
 (Erratum))

L45 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1996:528906 HCAPLUS  
 DOCUMENT NUMBER: 125:299509  
 TITLE: Microbial transformation of monoterpenes: flavor and  
 biological activity  
 AUTHOR(S): Nishimura, Hiroyuki; Noma, Yoshiaki

CORPORATE SOURCE: Dep. Biosci. Technol., Hokkaido Tokai Univ., Sapporo, 005, Japan  
 SOURCE: ACS Symposium Series (1996), 637(Biotechnology for Improved Foods and Flavors), 173-187  
 CODEN: ACSMC8; ISSN: 0097-6156  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English

AB A review with 25 refs. of the author's research which may contain some new data. Microbial transformation of (-)-carvone in *Mentha spicata* and 1,8-cineole in *Eucalyptus* species was studied from the viewpoint of the flavor and biol. activities. (-)-Cis-Carveol, one of products biotransformed from (-)-carvone, was transformed by *Streptomyces bottropensis* to produce a novel compd., (+)-bottrospicatol which exhibits the germination inhibitory activity against plant seeds. Furthermore, 1,8-cineole was transformed by a strain of *Aspergillus niger* to produce 3-hydroxycineoles. Hydrogenolysis of 3-hydroxycineoles afforded p-menthane-3,8-dioles (cis and trans) which exhibits repellent activity against mosquitoes. The flavor of microbial transformation products was evaluated. There is a growing interest among biochemists in the microbial transformation of natural products in terms of the prodn. of economically useful chems. In connection with effective utilization of terpenoids which are major constituents in higher plants, the microbial transformation of (-)-carvone (ca. 70% content) in *Mentha spicata* oil and 1,8-cineole (40-70% content) in *Eucalyptus* oils has been investigated from viewpoint of the flavor and biol. activities.

IT 3564-95-2

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
 (microbial transformation of monoterpenes: flavor and biol. activity)

L45 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:511248 HCAPLUS

DOCUMENT NUMBER: 119:111248

TITLE: Insecticidal effect of essential oils from Mediterranean plants on *Acanthoscelides obtectus* Say (Coleoptera, Bruchidae), a pest of kidney bean (*Phaseolus vulgaris* L.)

AUTHOR(S): Regnault-Roger, Catherine; Hamraoui, A.; Holeman, M.; Theron, E.; Pinel, R.

CORPORATE SOURCE: IBEAS, Univ. Pau et des Pays de l'Adour, Pau, F-64000, Fr.

SOURCE: Journal of Chemical Ecology (1993), 19(6), 1233-44

CODEN: JCECD8; ISSN: 0098-0331

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The bioactivity of 22 essential oils from arom. and medicinal plants was tested upon *A. obtectus* (Coleoptera, Bruchidae), a pest of kidney bean (*P. vulgaris*). The insecticidal effect was evaluated by detn. of 24- and 48-h LC50 and LC50 (from 1.50 mg/dm3 to >1000 mg/dm3). Isoprenoids and phenylpropanoids were identified by gas chromatog. The most efficient essential oils were extd. from plants belonging to Labiate. *Origanum marjorana* and *Thymus serpyllum* essential oils were the most toxic.

IT 78-70-6, Linalool 80-56-8, .alpha.-

Pinene 87-44-5 89-80-5, Menthone

89-83-8, Thymol 97-53-0 98-55-5,

.alpha.-Terpineol 99-85-4, .gamma.-Terpinene

106-23-0, Citronellal 106-24-1, Geraniol

115-95-7, Linalyl acetate 123-35-3

127-91-3 138-86-3 491-07-6, Isomenthone

499-75-2, Carvacrol 507-70-0, Borneol  
555-10-2, .beta.-Phellandrene 562-74-3  
1490-04-6, Menthol 3387-41-5, Sabinene  
6753-98-6

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(insecticidal activity of essential oils from Mediterranean plants against Acanthoscelides obtectus in relation to)

L45 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1991:183972 HCAPLUS

DOCUMENT NUMBER: 114:183972

TITLE: Fumigant toxicity of essential oils against four major stored-product insects

AUTHOR(S): Shaaya, Eli; Ravid, Uzi; Paster, Nachman; Juven, Benjamin; Zisman, Uzi; Pissarev, Vladimir

CORPORATE SOURCE: Dep. Stored Prod., ARO, Bet Dagan, 50250, India

SOURCE: Journal of Chemical Ecology (1991), 17(3), 499-504

CODEN: JCECD8; ISSN: 0098-0331

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The fumigant toxicity of 28 essential oils extd. from various spice and herb plants and some of their major constituents were assessed for adult coleopterans *Rhyzopertha dominica*, *Oryzaephilus surinamensis*, *Tribolium castaneum*, and *Sitophilus oryzae*. Three groups of active materials were distinguished: (1) The compds. terpinen 4-ol, 1,8-cineole, and the essential oils of three-lobed sage, sage, bay laurel, rosemary, and lavender were most active against *R. dominica*; (2) The compds. **linalool**, .alpha.-**terpineol**, and carvacrol and the essential oils of organo, basil, Syrian marjoram, and thyme were most active against *O. surinamensis*; and (3) the compd. 1,8-cineole and the essential oils anise and peppermint were active against *T. castaneum*.

IT 78-70-6, **Linalool** 98-55-5, .alpha.-**Terpineol** 499-75-2, Carvacrol 562-74-3, Terpinen 4-ol

RL: BIOL (Biological study)

(as fumigants against stored-product insects)

=> fil hcaplus  
 FILE 'HCAPLUS' ENTERED AT 11:44:23 ON 23 APR 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 23 Apr 2004 VOL 140 ISS 18  
 FILE LAST UPDATED: 22 Apr 2004 (20040422/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=>  
 =>

=> d stat que

L1	841	SEA FILE=REGISTRY ABB=ON PLU=ON FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN
L2	4221	SEA FILE=REGISTRY ABB=ON PLU=ON LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE
L3	9219	SEA FILE=REGISTRY ABB=ON PLU=ON ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLINONE OR FENCHOL OR THUJENE OR OCIMENE
L4	1134	SEA FILE=REGISTRY ABB=ON PLU=ON SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEH YDE OR METHOXYPHENYLACETONE CARYOPHYLLENE
L5	2386	SEA FILE=REGISTRY ABB=ON PLU=ON (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THYMYL)(W) ACETATE
L6	56	SEA FILE=REGISTRY ABB=ON PLU=ON METHOXYPHENYLACETONE OR CARYOPHYLLENE
L7	28510	SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN
L8	184111	SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL

OR LIMONENE

L9 132750 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR ESTRAGOLE OR GERANIAL  
OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLENOL OR  
TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR  
CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR  
OCIMENE

L10 54434 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 OR SABINENE OR ANETHOLE  
OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR  
ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L11 57324 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 OR (CIS OR TRANS)(2A)  
ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR  
BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL  
OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR  
THYMYL)(W) ACETATE

L12 9259 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR METHOXYPHENYLACETONE OR  
CARYOPHYLLENE

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR  
CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR  
CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL  
OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE  
OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL  
OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA  
L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L)(REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L)(LABIATAE OR UMBELLIFER  
A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS  
OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM  
OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16

L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19

L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18

L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998

L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR  
LAURUS OR MOBILIS

L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL

L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)

L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?

L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE  
? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)

L37 12006 SEA FILE=HCAPLUS ABB=ON PLU=ON 1000(W)PPM

L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11  
OR L12)(L)(REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE?  
OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR  
PESTICIDE? OR TERMITICIDE?)

L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU

S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR  
L33)

L46 350 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND (L7 OR L8 OR L9 OR  
L10 OR L11 OR L12 OR L14)

L47 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)

L48 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 NOT (L18 OR L22 OR L27 OR  
L33 OR L41)

=>  
=>

=> d ibib abs hitrn 148 1-2

L48 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:145670 HCAPLUS

DOCUMENT NUMBER: 128:216582

TITLE: Comparative flavor release profiles from oregano (  
**Origanum** virens) formulated into powdered  
materials

AUTHOR(S): Ferreira, Paulo M.; Empis, Jose A.; Bernardo-Gil, M.  
Gabriela

CORPORATE SOURCE: Dep. de Engenharia Quimica, Instituto Superior  
Tecnico, Lisbon, 1096, Port.

SOURCE: Current Status and Future Trends in Analytical Food  
Chemistry, Proceedings of the European Conference on  
Food Chemistry, 8th, Vienna, Sept. 18-20, 1995 (1995),  
Volume 2, 333-336. Editor(s): Sontag, Gerhard;  
Pfannhauser, Werner. Austrian Chemical Society:  
Vienna, Austria.  
CODEN: 65SOA5

DOCUMENT TYPE: Conference

LANGUAGE: English

AB The comparative release of the essential oil of oregano previously  
incorporated into two different materials was studied. Materials used as  
vehicles/encapsulating agents were starch and a lupine flour obtained as  
residue from the manuf. of lupine protein isolate. Headspace chromatog.  
of the dispersions of the flavorants in the powder was used to compare  
flavor release behavior. Flavor was initially added to the powd. supports  
and equilibrated at room temp. in airtight sealed containers at 500 and  
1000 ppm. For anal. purposes, conditioning at 37, 50  
and 70.degree.C was performed maintaining ERH conditions in order to  
roughly simulate the conditions encountered during processing and intake.  
Flavor profiles were compared with those obtained in GC spectra of the  
pure essential oil.

IT 78-70-6, Linalool 79-92-5, Camphene  
80-56-8, .alpha.-Pinene 87-44-5,  
Caryophyllene 89-83-8, Thymol 99-83-2  
, .alpha.-Phellandrene 99-85-4, .gamma.-  
Terpinene 123-35-3, Myrcene 127-91-3  
, .beta.-Pinene 138-86-3, Limonene  
470-67-7, 1,4-Cineole 499-75-2,  
Carvacrol 562-74-3, Terpinen-4-ol 586-62-9,  
Terpinolene 586-82-3, Terpinen-1-ol 2867-05-2,  
.alpha.-Thujene 3387-41-5, Sabinene  
8000-41-7, Terpineol

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(comparative flavor release profiles from oregano (*Origanum virens*) formulated into powd. materials)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN.

ACCESSION NUMBER: 1994:501800 HCAPLUS

DOCUMENT NUMBER: 121:101800

TITLE: an in vitro evaluation of botanical compounds for the control of the honeybee pathogens *Bacillus* larvae and *Ascosphaera apis*, and the secondary invader *B. alvei*

AUTHOR(S): Calderone, Nicholas W.; Shimanuki, Hachiro; Allen-Wardell, Gordon

CORPORATE SOURCE: Bee Res. Lab., USDA, Beltsville, MD, 20705, USA

SOURCE: Journal of Essential Oil Research (1994), 6(3), 279-87  
CODEN: JEOREG; ISSN: 1041-2905

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Bactericidal and fungicidal effects of eight plant exts. on the growth of two honeybee pathogens, *Bacillus* larvae (causative agent of American foulbrood) and *Ascosphaera apis* (causative agent of chalkbrood), and *Bacillus alvei* (a secondary invader in European foulbrood), were evaluated. Cinnamon oil completely inhibited the growth of *B. larvae* at 10 ppm for 72 h. **Camphor** and **citronellal** inhibited all growth at 100 ppm for 72 h. Bay oil, clove oil, **origanum** oil, and **thymol** inhibited all growth at 1000 ppm for 72h, and **.alpha.-terpinene** inhibited all growth at 10,000 ppm for 72h. Cinnamon oil completely inhibited the growth of *A. apis* at 100 ppm for 168 h. Bay oil, **citronellal**, clove oil, **origanum** oil and **thymol** inhibited all growth at 1,000 ppm for 168 h. **Camphor** inhibited all growth at 10,000 ppm for 168 h, and **.alpha.-terpinene** inhibited all growth for 72 h at 10,000 ppm. Cinnamon oil and **thymol** completely inhibited the growth of *B. alvei* at 10 ppm for 72 h. Bay oil, **camphor** and **origanum** oil inhibited all growth at 100 ppm for 72 h. Clove oil and **citronellal** inhibited all growth at 1000 ppm for 72 h, and **.alpha.-terpinene** inhibited growth at 10,000 ppm for 72 h. Several compds. reduced growth in a dose dependent manner at levels below their threshold values. Thus, plant exts. might play a significant role in the management of honeybee diseases.

IT 76-22-2, **Camphor** 89-83-8, **Thymol**  
99-86-5, **.alpha.-Terpinene** 106-23-0,  
**Citronellal**

RL: BIOL (Biological study)  
(in control of honeybee diseases)



=> d stat que

L1 841 SEA FILE=REGISTRY ABB=ON PLU=ON FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN

L2 4221 SEA FILE=REGISTRY ABB=ON PLU=ON LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE

L3 9219 SEA FILE=REGISTRY ABB=ON PLU=ON ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L4 1134 SEA FILE=REGISTRY ABB=ON PLU=ON SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L5 2386 SEA FILE=REGISTRY ABB=ON PLU=ON (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THMYL)(W) ACETATE

L6 56 SEA FILE=REGISTRY ABB=ON PLU=ON METHOXYPHENYLACETONE OR CARYOPHYLLENE

L7 28510 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR FENCHOLE OR LAVANDUOL OR CHAVICOL OR METHYLINONE OR MYRCENE OR NCROL OR NONANAL OR PHELLADRENE OR PULEGONE OR TERMINENE OR TERPENYL OR TEPINENE OR TERPINEOL? OR TETRAMETHYLPHENOL OR THUJENE OR THYMIL OR TRICYCLEN

L8 184111 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR LINALOOL OR PINENE OR MENTHOL OR MENTHONE OR THYMOL OR METHYLEUGENOL OR EUGENOL OR TERPINEOL OR PHELLANDRENE OR TERPINENE OR GERANIOL OR NEROL OR DECANAL OR MYRCENE OR OCTANAL OR NONANAL OR ISOBORNEOL OR LIMONENE

L9 132750 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 OR ESTRAGOLE OR GERANIAL OR FENCHENE OR BISABOLENE OR LAVANDULOL OR TRICYCLEN OR TETRAMETHYLPHENOL OR METHYLPENTAN? OR OCTANOL OR FENCHONE OR CIMEN(2A)8(2A)OL OR METHYLIONONE OR FENCHOL OR THUJENE OR OCIMENE

L10 54434 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 OR SABINENE OR ANETHOLE OR CITRAL OR CADINENE OR MENTH(2W)2(2W)EN(2W)1(2W)OL OR ANISALDEHYDE OR METHOXYPHENYLACETONE CARYOPHYLLENE

L11 57324 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 OR (CIS OR TRANS)(2A) ANETHOLE OR ANISALDEHYDE OR ANIS(2A)(ALDEHYDE OR KETONE) OR BISABOLENE OR BORNEOL OR (METHOXYPHENYL OR METHOXY(W)PHENYL OR MENTHYL OR EUGENYL OR BORNYL OR GERANYL OR LINALYL OR THMYL)(W) ACETATE

L12 9259 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR METHOXYPHENYLACETONE OR CARYOPHYLLENE

L13 6790 SEA FILE=REGISTRY ABB=ON PLU=ON CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLAL OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L14 231798 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 OR CADIDENE OR CAMPHENE OR CAMPHOR OR CARENE OR CARYOPHYLLENE OR CARVONE OR CARVACROL OR CARYOPHYLLENE OR CINNAMIC(W)ALDEHYDE OR CITRAL OR CITRONELLA L OR CINEOL OR ANISOLE OR CARYOPHYLLENE OR CINEOLE OR CYMEME

L15 7857 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (REPEL? INSECTICIDE? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)

L16 1553 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 (L) (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
L17 750 SEA FILE=HCAPLUS ABB=ON PLU=ON L14(L) (LABIATAE OR UMBELLIFER  
A OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMUS OR  
PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR CAPITATUS  
OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR MINUTIFLORUM  
OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L18 13 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16  
L19 1261 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L20 103 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L19  
L21 90 SEA FILE=HCAPLUS ABB=ON PLU=ON L20 NOT L18  
L22 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND PD=<OCTOBER 10, 1998  
L24 9850 SEA FILE=HCAPLUS ABB=ON PLU=ON ?LABIAT? OR ?UMBELLIFER? OR  
LAURUS OR MOBILIS  
L25 608 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ESSENTIAL OIL  
L26 42 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (REPEL? INSECTICIDE?  
OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L27 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 NOT (L18 OR L22)  
L30 80 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND ?EMULS?  
L32 21 SEA FILE=HCAPLUS ABB=ON PLU=ON L30 AND (REPEL? OR INSECTICIDE  
? OR APHICIDE? OR ACARICIDE? OR ANTIBACTERIAL(W) AGENT OR  
FUNGICIDE OR NEMATOCIDE? OR PESTICIDE? OR TERMITICIDE?)  
L33 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT (L18 OR L22 OR L27)  
L37 12006 SEA FILE=HCAPLUS ABB=ON PLU=ON 1000(W)PPM  
L39 2930 SEA FILE=HCAPLUS ABB=ON PLU=ON (L7 OR L8 OR L9 OR L10 OR L11  
OR L12) (L) (REPEL? OR INSECTICIDE? OR APHICIDE? OR ACARICIDE?  
OR ANTIBACTERIAL(W) AGENT OR FUNGICIDE OR NEMATOCIDE? OR  
PESTICIDE? OR TERMITICIDE?)  
L40 46 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L41 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 NOT (L18 OR L22 OR L27 OR  
L33)  
L46 350 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND (L7 OR L8 OR L9 OR  
L10 OR L11 OR L12 OR L14)  
L47 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L48 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L47 NOT (L18 OR L22 OR L27 OR  
L33 OR L41)  
L49 231273 SEA FILE=HCAPLUS ABB=ON PLU=ON PPM  
L50 5779 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND (L7 OR L8 OR L9 OR  
L10 OR L11 OR L12 OR L14)  
L51 25 SEA FILE=HCAPLUS ABB=ON PLU=ON L50 AND (LABIATAE OR  
UMBELLIFERA OR THYMBRA OR SATUREJA OR ORIGANUM OR CORYDOTHYMU  
S OR PINPINELLA OR FOENICULUM OR SPICATA OR MAJORANA OR  
CAPITATUS OR VULGARE OR SOLYMICUM OR SPYLEUM OR BILGERI OR  
MINUTIFLORUM OR ACCATUM OR SRIACUM OR ONITES OR ANISUM)  
L52 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L51 NOT (L18 OR L22 OR L27 OR  
L33 OR L41 OR L48)  
L53 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L52 AND PD=<OCTOBER 10, 1998

=>  
=>

=> d ibib abs hitrn 153 1-6

L53 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:39704 HCAPLUS

DOCUMENT NUMBER: 116:39704

TITLE: Production of giant hyssop oil by plant tissue culture

AUTHOR(S): Shin, Soon Hee; Kim, Hae Kyung; Chi, Hyung Joon.

CORPORATE SOURCE: Coll. Pharm., Duksung Women's Univ., Seoul, 132-714,  
S. Korea

SOURCE: Saengyak Hakhoechi (1991), 22(2), 91-4

CODEN: SYHJAM; ISSN: 0253-3073

DOCUMENT TYPE: Journal

LANGUAGE: Korean

AB Callus was derived from the seedlings of *Agastache rugosa* (**Labiatae**). The growth rate of callus and the prodn. of essential oil were studied with the variation of culturing conditions. 2,4-D 2 ppm in the medium was more effective for the prodn. of essential oil than NAA 2 ppm. The growth rate of callus and the prodn. of essential oil were inhibited by the illumination of the light. The essential oils from *Agastache rugosa* and the callus cultivated on the medium contg. 2,4-D 2 ppm and kinetin 0.2 ppm were analyzed by TLC, gas chromatog. and mass spectrometry. These two oils showed different comps. The main component of the plant oil, Me **chavicol**, was not contained in the callus oil.

IT 140-67-0, Methyl **chavicol**

RL: BIOL (Biological study)

(of essential oil, from *Agastache rugosa*)

L53 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:549118 HCAPLUS

DOCUMENT NUMBER: 107:149118

TITLE: Influence of foliar applied cytokinins on growth and essential oil content of several members of the Lamiaceae

AUTHOR(S): El-Keltawi, Naiem E.; Croteau, Rodney

CORPORATE SOURCE: Inst. Biol. Chem., Washington State Univ., Pullman,  
WA, 99164-6340, USA

SOURCE: Phytochemistry (1987), 26(4), 891-5

CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Foliar application of the cytokinins kinetin, diphenylurea, benzylaminopurine and zeatin at the 1-10 ppm level has a general growth promoting effect on *Mentha piperita*, *M. spicata*, and *Salvia officinalis*, but not on *M. suaveolens* and *Lavandula vera*, grown under controlled environmental conditions. The essential oil yield of cytokinin-treated plants is also increased .ltoreq.2-fold on a fresh wt. basis relative to untreated controls, with only a minor influence on oil compn. in most cases. The increase in oil yield cannot be attributed to alteration in growth or development of the treated plants, or to changes in oil gland populations. In vitro assay of the enzymes catalyzing the rate limiting steps of **camphor** biosynthesis in *S. officinalis* and of (-)-**menthone** biosynthesis in *M. piperita* indicated that the increase in oil yield under the influence of cytokinin is a result of increased monoterpene biosynthesis.

IT 76-22-2, **Camphor** 127-91-3, .beta.-

**Pinene** 470-82-6, 1,8-Cineole 507-70-0

, **Borneol** 1196-31-2, (+)Isomenthone 2216-51-5

, (-)Menthol 14073-97-3 20752-34-5,

(+)-Neoisoomenthol

RL: BIOL (Biological study)  
(cytokinins effect on, in Lamiaceae)

IT 110639-20-8

RL: BIOL (Biological study)  
(of *Mentha piperita*, cytokinins effect on)

L53 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:435045 HCAPLUS

DOCUMENT NUMBER: 107:35045

TITLE: Salinity depression of growth and essential oil formation in spearmint and marjoram and its reversal by foliar applied cytokinin

AUTHOR(S): El-Keltawi, Naïem E.; Croteau, Rodney

CORPORATE SOURCE: Inst. Biol. Chem., Washington State Univ., Pullman, WA, 99164-6340, USA

SOURCE: Phytochemistry (1987), 26(5), 1333-4

CODEN: PYTCAS; ISSN: 0031-9422

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Irrigation of spearmint (*Mentha spicata*) and marjoram (*Majorana hortensis*) with a saline soln. consisting of CaCl<sub>2</sub> and NaCl reduces overall growth, suppresses essential oil formation and alters the monoterpene compn. of the resulting oil. Simultaneous foliar application of the cytokinin diphenylurea (at 10 ppm) or kinetin (at 4 ppm) largely reverses the adverse effects of salinity on both growth and essential oil prodn.

IT 546-79-2 3387-41-5

RL: BIOL (Biological study)  
(of marjoram oil, cytokinins and saline irrigation effect on)

IT 99-49-0 5989-27-5

RL: BIOL (Biological study)  
(of spearmint oil, cytokinins and saline irrigation effect on)

L53 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:494143 HCAPLUS

DOCUMENT NUMBER: 93:94143

TITLE: The effect of zinc on growth and amino-acid metabolism in barley (*Hordeum vulgare* L.)

AUTHOR(S): Srivastava, R. S. L.

CORPORATE SOURCE: Dep. Bot., Allahabad Univ., Allahabad, India

SOURCE: Indian Journal of Agricultural Research (1979), 13(4), 245-8

CODEN: IJARC2; ISSN: 0367-8245

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Barley seeds were treated with 400 ppm Zn sulfate and then grown in sand with complete nutrient soln. including (++)Zn and excluding (+-Zn) Zn. Untreated seeds were also grown with full nutrient soln. as a control (--Zn) Zn. Dry matter accumulation and synthesis of leucine [61-90-5] + phenylalanine [63-91-2], .gamma.-aminobutyric acid [56-12-2], .alpha.-alanine [56-41-7], glutamic acid [56-86-0], serine [56-45-1], and glycine [56-40-6] were greater in Zn-treated than control plants. After 30 days, dry matter of ++Zn, +-Zn, and --Zn plants were 0.188, 0.182, and 0.168 g/plant, resp. Total free amino acids and amides were greater in Zn-treated than control plants except in leaves of 30-day-old plants, in which +-Zn plants contained 578 and controls 598 .mu./10 mg [sic] dry wt.

IT 61-90-5, biological studies

RL: BIOL (Biological study)  
(of barley, zinc effect on)

L53 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:534706 HCAPLUS

DOCUMENT NUMBER: 91:134706  
 TITLE: Antimicrobial activity of aroma chemicals and essential oils  
 AUTHOR(S): Morris, J. A.; Khettry, A.; Seitz, E. W.  
 CORPORATE SOURCE: Res. Dev. Dep., Int. Flavors and Fragrances, Inc., Union Beach, NJ, 07735, USA  
 SOURCE: Journal of the American Oil Chemists' Society (1979), 56(5), 595-603  
 CODEN: JAOCA7; ISSN: 0003-021X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Of 521 fragrance materials tested, 44% were inhibitory against 1 of 3 test organisms (Staphylococcus aureus, Escherichia coli, or Candida albicans), and 15% were effective against all 3. Of 212 compds. subsequently tested against Corynebacterium, 30% were pos. against all 4 test organisms; however, only 4% had a minimal inhibitory concn. (MIC) as low as 50 ppm, compared with the control soap bacteriostat TCC which had a MIC of 0.08 ppm. In hand-disinfectant tests, no redn. of bacterial counts was obsd. in soaps contg. the most active fragrance compds. Apparently, a practical antimicrobial soap fragrance is not likely.

IT 78-70-6 79-92-5 83-66-9 89-78-1  
 91-64-5 93-15-2 93-16-3 94-48-4  
 97-53-0 97-54-1 101-39-3 101-86-0  
 103-95-7 104-46-1 104-93-8 106-22-9  
 106-23-0 106-24-1 106-25-2 107-75-5  
 115-95-7 121-33-5 123-11-5, biological studies  
 124-13-0 124-19-6 124-76-5 127-91-3  
 138-86-3 141-92-4 142-50-7 489-86-1  
 498-16-8 502-99-8 507-70-0 564-94-3  
 1329-99-3 1331-92-6 1333-49-9  
 1754-00-3 2244-16-8 4194-00-7  
 5392-40-5 5989-33-3 6485-40-1  
 6709-39-3 7549-37-3 7786-29-0  
 8000-41-7 19009-56-4

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (antimicrobial activity of)

L53 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1968:418212 HCAPLUS  
 DOCUMENT NUMBER: 69:18212  
 TITLE: The absorption of potassium and several organic compounds by barley roots: effect of siduron  
 AUTHOR(S): Splittstoesser, Walter E.  
 CORPORATE SOURCE: Univ. of Illinois, Urbana, IL, USA  
 SOURCE: Plant and Cell Physiology (1968), 9(2), 307-14  
 CODEN: PCPHA5; ISSN: 0032-0781  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The absorption of 42K by excised roots of barley (Hordeum vulgare) grown in 0-5 ppm. siduron (1-(2-methylcyclohexyl)-3-phenylurea) was a linear function of time for .gtoreq.60 min. with transport being unidirectional. The absorption of siduron was a function of the external concn. to the limits of its soly. (0.09 mM). However, the siduron-14C absorbed by roots grown in either 0 or 5 ppm. siduron was in a readily exchangeable form, and desorption for 4 hrs. exchanged 80% of the label. Glucose-14C, adenine-8-14C, and leucine-14C were actively absorbed with 70-85% of the label being absorbed in 24 hrs. Although roots grown in siduron absorbed less 42K, glucose-14C, adenine-14C, and more leucine-14C than similar roots grown in water culture, it is probable that these differences were not large enough to

Pryor 09\_807254

account for the noted redn. (60%) in root growth.

IT

61-90-5, biological studies

RL: BIOL (Biological study)

(root absorption of, siduron effect on, in barley)